Wisconsin's Nursing Nome Quality Assurance Project

Executive Sumary

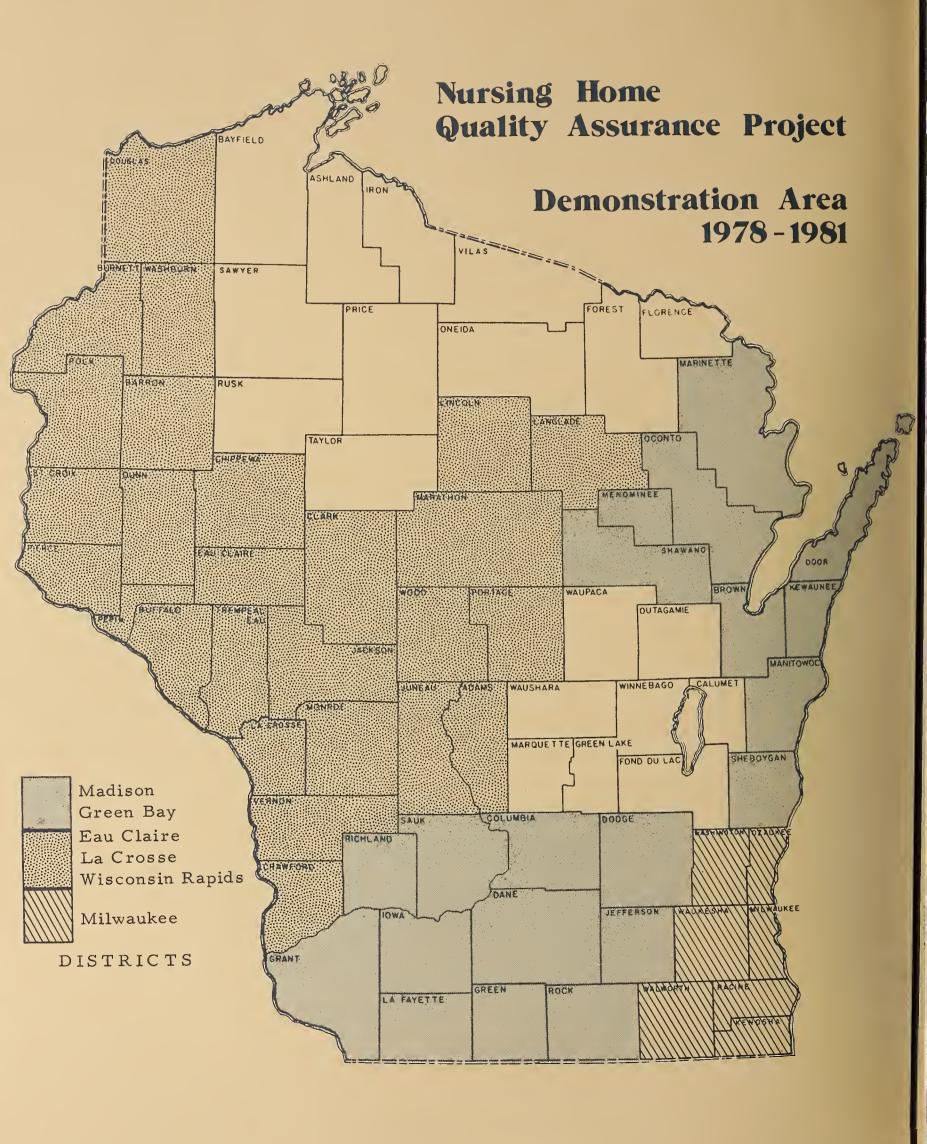
1978-82

A demonstration to test screening and sampling to assess quality of care in nursing homes.



Wisconsin Department of Health and Social Services
Division of Health · P.O. Box 309 · Madison · WI 53701

Exec. Summ.



997.5 .W6 W6 1982 Exec.

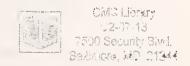
THE NURSING HOME QUALITY ASSURANCE PROJECT

JULY 1978 THROUGH SEPTEMBER 1982

EXECUTIVE SUMMARY

This report is made pursuant to Grant No. 11-P-97029/5 between the Health Care Financing Administration and the Wisconsin Department of Health and Social Services. The waiver-only demonstration was carried out by staff in the Bureau of Quality Compliance in the Division of Health in the Wisconsin Department of Health and Social Services.

THE VIEWS AND OPINIONS EXPRESSED IN THIS REPORT ARE THE GRANTEE'S, AND NO ENDORSEMENT BY THE DEPARTMENT OF HEALTH AND HUMAN SERVICES OR THE HEALTH CARE FINANCING ADMINISTRATION IS INTENDED.





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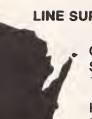
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ABSTRACT

After four years, the Wisconsin Nursing Home Quality Assurance Project (QAP) has reached the end of its demonstration. We present in this report a summary of the project's development, goals, methods and outcomes. We also discuss our successes and failures, trying to set these in the broader context of events and changes which have taken place outside the project.

We began the demonstration with high expectations. State experts in the field of long-term care had examined Wisconsin's nursing home regulatory process, identified inefficiencies, and proposed changes which they claimed would result in a more cost-effective use of state resources.

The Quality Assurance Project was the result. The primary objective of the project was to improve effectiveness of two nursing home quality assurance responsibilities carried out by states—the facility survey and inspection of resident care—using existing resources. Through use of a "targeted" or "triage" approach involving screening and sampling, it was hoped that surveyors would be able to make more efficient and effective use of their time and skills.

In the facility survey portion of the project, surveyors "screened" the facility using ten key quality criteria to verify that necessary care systems were working. Screening was an alternative to the mandated full survey and its code checklist of 1,500 plus state and federal regulations. In the resident review portion of the project, surveyors conducted in-depth reviews of the care of a sample of residents, the theory being that if the system for providing good quality resident care is

functioning for a sample of residents, it should function for all residents. In-depth resident sampling was an alternative to the mandated inspection of care of all Medicaid residents. Time saved through screening and sampling in good quality homes was reallocated to homes with problems. Surveyors were encouraged to use this time for more varied and innovative follow-up actions to problem resolution.

The demonstration approval began in July 1978 and continued through September 1982. During this period, project methods were implemented, tested and refined based on in-the-field observations and results of data monitoring studies. We employed a four-cell experimental design and tested four treatment combinations: N/N - "new" facility screening/"new" resident sampling; N/O - "new" facility screening/"old" resident inspection of care; O/N - "old" facility survey/"new" resident sampling; and O/O -"old" facility survey/"old" resident inspection of care. On July 1, 1982 we phased-out ongoing field testing.

Seven data studies summarized in this report address the extent to which the project met its original hypotheses. On the whole, project methods as originally envisioned were moderately well implemented. However, anticipated outcomes occurred only in part. The primary objective of greater improvement of quality of care in nursing homes under QAP methods was not observed. However, we did find that QAP surveyors were able to produce results under screening and sampling that were comparable to the mandated methods with fewer total staff hours. Although not included as hypotheses, our report will show that other unanticipated benefits of the project were also found.

I. OVERVIEW OF PROJECT AND CONCLUSIONS

The National Center for Health Statistics reported in 1981 that twenty percent of the elderly will spend some time in a long-term care facility. If you are not living in a long-term care facility, you are subsidizing much of the cost of the nursing home care through tax monies which support the Medicare and Medicaid Programs. In Wisconsin, about 70% of the State's 55,000 nursing home residents have the cost of their care reimbursed by Medicaid. In 1982, this was expected to amount to \$595.5 million. Whether as a nursing home resident or as a taxpayer, the quality of nursing home care is of great concern to us all.

The quality of long-term care is assured through the complex interaction of the "sophistication of the nursing home industry" with state, federal and consumer monitoring systems. A glossary (Appendix A) in the back of this report will help define the terminology we use to describe the state and federal monitoring systems. Each state has developed a regulatory structure meshing the basic federal survey and Medicaid resident review requirements with state licensure and enforcement authority. These systems are felt to be minimal requirements. No wonder the Wisconsin Nursing Home Quality Assurance Project (QAP) demonstration raised eyebrows in 1978 when it sought federal approval to have even these minimal requirements waived in order for the State to demonstrate an alternative approach to its role in nursing home regulation.

In Wisconsin, staff within the Bureau of Quality Compliance inspect nursing homes for state licensure requirements and, if facilities elect, for certification as providers of service to Medicaid and Medicare Program recipients. The inspection consists of two primary parts. The facility survey for licensure and for Medicaid or Medicare certification is conducted by a nurse, social worker, sanitarian and engineer who inspect the home for compliance with more than 1,500 state and federal regulations. In addition, the Bureau fulfills the federal requirement to conduct an on-site review of each Medicaid recipient, referred to as the "inspection of care." A nurse, social worker, and as needed, a physician carry out this review for adequacy of care and appropriateness of placement.

In 1978, Wisconsin received federal approval to carry out its innovative screening and sampling approach to nursing home inspection. Then, in 1980, the federal government awarded a grant to an independent evaluator to assess the effectiveness of project methods. The methods were demonstrated "in the field" from July 1978 through June 1982. During this dem-

onstration period, project components were tested and refined based on our field observations and results of our data monitoring studies. We employed a four-cell experimental design and tested four combinations of new and old methods.

We present in this report a summary of the project's development, goals, methods, and outcomes. We also discuss our successes and failures, trying to set these in the broader context of events and changes which have taken place outside the project. It should be noted parenthetically that Wisconsin's ongoing nursing home regulatory process is in itself a more cohesive approach than is used in other states.

We began with high expectations to improve an already streamlined regulatory process. State experts in the field of long-term care had examined the nursing home regulatory process as it was carried out in 1976-77, and proposed changes which they claimed would result in more cost-effective use of State resources. (See Sections II and III for background on the project's history.)

The Quality Assurance Project was the result. The primary objective of the project was to reallocate existing resources to improve effectiveness of the facility survey and resident inspection of care. Ultimately, we hypothesized this targeting would result in improved quality of resident care in nursing homes.

The major thrust of the demonstration was to apportion time spent in homes based on the quality of care rather than spending time checking each resident and every regulation. In the facility assessment portion of the project, surveyors could elect to "screen" an average or better facility using ten key quality criteria to verify that necessary care systems were working up to standard. QAP used the same surveyors as the ongoing survey process—a nurse, social worker, sanitarian and engineer—but stressed a multi-disciplinary team approach. The ten key screening criteria had been identified at the onset of the demonstration by Wisconsin health care professionals and experts in long-term care. These items focused more directly on quality of care delivery and less on paperwork requirements. In homes with a problem history and in homes where the results of screening suggested a home was currently having problems, surveyors would carry out the mandated full survey using the 1,500 plus code checklist.

Similarly, in the resident assessment portion of the project, surveyors could elect to conduct in-depth re-

views of a sample of residents of all pay types. Sampling was designed to be used in homes with a history of delivering adequate or better quality of resident care. It was an alternative to the federally mandated review of all Medicaid residents in a facility. The assumption underlying sampling was that if the system for providing adequate quality of resident care is functioning for a sample of residents, it is functioning for all residents. QAP used the same professionals who carry out the mandated inspection of care—a nurse and social worker, with a physician when needed. QAP stressed joint assessments of the care of each resident in the sample through staff interviews, resident interviews, and reviews of the resident's medical chart. If surveyors opted to use sampling in a home, the home would then either pass or fail the sample. If the home failed the sample, surveyors would carry out the mandated inspection of care of all Medicaid residents.

Time saved through screening and sampling in average or better homes was to be reallocated to homes with problems. More time could be spent in these homes, and surveyors were encouraged to conduct more varied and innovative follow-up actions in all nursing homes. Surveyors were to consider the most effective means of problem resolution rather than just citing code deficiencies and making recommendations as they traditionally would. They could apply the mandated survey and inspection of care if there were pervasive compliance problems. They could also choose from other actions, such as consultation, inservices, special advisors, surprise surveys, and further investigation, which could be used in addition to or instead of citing of code violations.

In addition to the two major components of screening and sampling, QAP tested other innovations in the facility and resident assessment process. It emphasized use of a "strategy session" prior to the survey, an interdisciplinary team approach to inspection, use of a systems perspective in diagnosing and analyzing problems in a nursing home's performance, and use of an advisory nursing home administrator as a member of the survey team. The latter innovation was particularly controversial because it linked assessment efforts between the State and the nursing home industry. The nursing home administrator served as an advisor to the survey team and provided a valuable management and administrative expertise. (Section IV of this report includes a fuller explanation of the project's components.)

Seven data studies summarized in this report address the extent to which the project met its original hypotheses. We found that while we did not always meet our objectives, some interesting outcomes did occur. An important question was "Did QAP methods improve the quality of resident care using existing resources better than the mandated methods as hypothesized?" None of the data studies indicate a higher quality of care in QAP than non-QAP homes. What we found instead was no differences overall in compliance with regulations, no difference overall in Medicaid reimbursement to facilities, and fewer surveyor staff hours required to carry out QAP methods.

These findings must be considered along with the practicality of these methods "in the field" and the degree to which they were implemented. We believe individual surveyors were able to use the facility screening methods as proposed. However, it was difficult for many surveyors to utilize a fundamentally new process which required them to switch from a code compliance headset to screening for outcome and making quality determinations. Some surveyors apparently tended to use their own key indicators drawn heavily from the 1,500 plus regulations for which they normally check. In addition, very few engineers actually screened for the Life Safety Codes, in part due to the conditions placed on engineer screening in order to obtain the waivers from HCFA. Ultimately these restrictions meant that the engineers still had to complete the Life Safety Code portion of the survey. Thus, facility screening as proposed was minimally implemented by all surveyor disciplines.

Resident sampling was fully implemented and appears to have been overused. We did not anticipate, for some reason, the element of human psychology entering into sampling. In the demonstration, surveyors not only made the judgments on individuals' care levels in the sample but also knew the pass/fail criteria. Data suggest that surveyors' judgments were influenced by this prior knowledge. Other factors, such as quality of care, which does not necessarily correlate with the numbers of incorrect care levels, also may have prompted the surveyors to pass the sample.

The goal of achieving time reallocation was only partially met. While QAP surveyors reallocated time from good to problem homes, non-QAP surveyors reallocated as much or more than QAP surveyors. Contrary to QAP's hypothesis, QAP surveyors spent less, not equal, total time in homes of all quality.

To supplement annual facility assessment and resident assessment activities, QAP surveyors used more total follow-up actions than non-QAP surveyors as predicted. The number and range of these actions declined over time, possibly due to dramatic losses of bureau consultants during the course of the demonstration and to the QAP change in citing policy. Other

factors such as training and supervisory feedback may also have barred the full implementation of this objective. (See Section IV for the field observations and Section VI for the results of selected monitoring studies which are the basis for the above conclusions.)

So what did QAP achieve and what is the future of the methods? QAP demonstrated that it is possible to maintain existing quality in Wisconsin demonstration nursing homes (as measured by deficiencies cited) with fewer surveyor staff hours and with less than a 100% review process. As for the future of the methods, three of the QAP components - screening, sampling and alternate actions to citing - cannot be continued without federal waivers or changes in state and federal regulations. Of these methods, in-depth assessments of a sample of residents, which was more fully tested, seem to hold the most potential as a flexible and creative method of review. Based on experience gained during the demonstration, we believe it would be possible to devise a sampling strategy that both saves time and overcomes the surveyor bias QAP encountered.

Many of the QAP concepts which do not require waivers or regulation changes have been implemented or are scheduled for adoption by Wisconsin including:

- -strategy sessions;
- -tighter, team scheduling;
- -in-depth resident reviews, for a subset of all Medicaid recipients in a facility, and standard reviews for all remaining Medicaid residents;
- -multi-disciplinary team problem solving.

Wisconsin is also considering future use of the advisory nursing home administrator.

In addition, QAP's experience in the following areas may be useful if regulatory agency budget reductions continue:

- -problem facility identification;
- -screening;
- -sampling.

(See Section VII for further analysis of implications of the demonstration methods.)

One side benefit accrued through QAP was the mirror it held up to Wisconsin's ongoing survey process. It was helpful to know that the existing nursing home regulation system is effective at problem detection and lasting problem correction. The data collected during the demonstration by QAP and by the independent evaluator suggest both QAP and the ongoing process are working well and are about equal in their outcomes. At the same time, the close scrutiny provided the Bureau of Quality Compliance with valuable feedback. Through reorganization and procedure amendments, some intrinsic, internal bureau problems (such as team functioning and supervision) are being addressed that will improve the survey process under any method.

Although we found that QAP saved time, chiefly through sampling, and that quality of nursing home care did not deteriorate, there is a price paid for this outcome. The price is loss of capacity to advocate for individual Medicaid residents not in the sample who may need additional services or placement in another setting. However, with modifications in the QAP components, we feel the cost efficiency and effectiveness of the methods have been demonstrated and provide a basis of information for decision makers studying proposed changes in the nursing home regulatory process and goals.

II. PROJECT HISTORY

In 1976, Wisconsin, through the Medicaid Management Study Team (MMST), took a critical look at its Medicaid Program, particularly at nursing home costs which were the major budget expenditure. The MMST was a task force charged with assessing the processes in place for monitoring cost and quality of Medicaid services and recommending ways to make the program more cost-effective. In 1977, Wisconsin paid Medicaid claims of approximately \$270 million to the 452 long-term care facilities caring for about 33,000 Medicaid recipients. In 1982, this increased to an estimated \$595.5 million to the State's 446 nursing homes providing care for approximately 37,800 Medicaid recipients. Costs appeared to be generous and continued to increase, but the question of whether the quality of nursing home services was adequate remained unanswered.

Each state varies in its approach to nursing home regulation. Wisconsin has meshed the requirement for licensure inspections to determine compliance with state codes with two federal requirements: (1) checking the care of each Medicaid resident and (2) surveying facilities which elect to participate in Medicare and Medicaid for compliance with federal conditions of participation. The review of residents looks at quality of care and utilization of services. The facility review applies conditions specifying the staff, building safety and administrative requirements that nursing homes must meet to qualify for licensure and certification.

The MMST found Wisconsin had a history of innovative development in the area of long-term care regulation. The size of the State, scattered distribution of its long-term care facilities, and large number of such facilities combined to force Wisconsin to design and implement cost-effective measures for enforcing state and federal regulations. Nursing home quality assurance is performed by staff in the State's Department of Health and Social Services and the responsibilities have been consolidated over time.

Until 1973, the inspection of care of Medicaid residents and Medicaid reimbursement agency duties were performed by staff in a division separate from the division performing the facility survey. In 1973, the State realized the process could be more efficient if resident inspection and facility survey were performed by the same staff, although Medicaid reimbursement continued to be handled by a separate division. Thus, the nurses who conducted the Medicaid resident inspections with social workers also worked

along with registered sanitarians and professional engineers or architects, on the Medicare and Medicaid health and life safety survey and the state licensure inspection.

In 1975, Wisconsin went one step further. In an effort to control the ever-Increasing burden of paperwork, federal and state codes were combined on one document giving surveyors a master checklist of all applicable codes, thereby reducing the amount of time necessary to record survey findings. This checklist matches equivalent state and federal codes wherever possible, so that violations of equivalent codes are treated as one deficiency for which the facility is asked for one plan of correction.

Therefore, at the time of the MMST study in 1976, many strengths were already present in Wisconsin's regulatory system which made it superior to other states. First, the facility survey and Medicaid resident inspection were conducted by the same surveyors, allowing for transfer of information between the two processes and greater ability to control nursing home action to correct identified problems. Second, there was a checklist that tied the state process to the federal process. Third, there were professional survey staff, Including nurses, social workers, sanitarians, and engineers or architects, who surveyed at approximately the same time in the facilities and functioned, to varying degrees, as a team. Fourth, there was a high degree of interest among the State's legislature and consumer groups, including pending legislation that would strengthen enforcement of state codes. And finally, the quality of care in Wisconsin's homes was felt to be better overall than that in many other states.

The Study Team found, however, that the survey and inspection process required the State to spend the same amount of time in all homes, regardless of quality of care. The Study Team further observed that the State's time in these homes was not efficiently scheduled. Survey staff members could be in and out of a facility during a six to eight week period, in many cases never overlapping to share interdisciplinary findings. Also the Study Team noted that while facilities may have corrected the problems found, they failed to take corrective action to resolve the source of identified problems. For instance the facility may have obtained physician signatures on drug orders for current residents but not set up a process to insure physician review and signature of all future orders.

The Study Team recommended that the State target its time toward the bad homes, that it increase its efficiency by not spending its time unnecessarily in good facilities, and that it obtain expertise in nursing home administration to better identify the source of systems problems by including an advisory nursing home administrator in the survey process.

The Study Team looked at possible approaches to such a survey process and developed facility screening and resident sampling concepts which could be used to quickly assess whether homes with an average or good history of compliance were still acceptable or whether further action was needed based on problems which had developed. Although at that time the Study Team did not develop the resident sampling approach beyond a recommendation stage, facility screening was developed to the pilot stage.

During the Medicaid Management Study Team, Wisconsin experts from academia, the state and the longterm care industry to develop a screening survey tool to evaluate the adequacy of geriatric care and another to evaluate the care of mentally retarded and physically handicapped residents in long-term care facilities. Dimensions were weighted so that review teams would rate the importance of each criterion in the same way. Examples of acceptable and unacceptable performance on each criterion were given. The geriatric instrument was tested by five teams of experts in nine nursing homes. The MMST found that the screening instrument appeared to provide reliable and valid measures of nursing home care. The nongeriatric tool was not tested separately because it resembled the geriatric instrument on almost every criterion. In June 1977, the MMST reports were submitted to the Wisconsin Department of Health and Social Services, the Governor and the Legislature; and Wisconsin continued to upgrade its already creative approach to a cumbersome survey process while pondering MMST recommendations.

For several years, criticisms had persisted that non-compliant homes continued to operate. So action was taken, this time via changes in state statutes. This leg-listation, passed in November 1977, provided more incentives for correction of licensure violations by increasing the State's power to enforce regulations and initiate penalties ranging from forfeitures to closures.

At the same time, a Department of Health and Social Services reorganization brought the Medicaid reimbursement agency, the inspection of resident care/survey and certification bureau, and the health planning process under the Division of Health. Also, at this time, social workers, who had always done resident

assessments, were included on the nursing home survey team. They began to check for compliance with social services and residents' rights requirements which had previously been done by the nurse.

The Department of Health and Social Services had reviewed the MMST recommendations and felt that some had merit. In October 1977, two former Study Team members were hired to pursue the possibility of demonstrating screening and sampling within the Department's Division of Health, Bureau of Quality Compliance. To demonstrate a new approach to surveying nursing homes for licensure, certification, and resident care, waivers of federal regulations were required. A demonstration proposal was submitted to the federal Health Care Financing Administration (HCFA) under Section 1115 of the Social Security Act and subsequently approved. As a part of the approval, federal requirements mandated an experimental design to enable research and evaluation of project methods. Existing bureau survey staff were used to conduct the demonstration. Additional project staff were hired to implement, administrate and report findings. These staff were funded at 50/50 state and federal match.

The project goal was to improve the quality of care given to nursing home residents. The task of devising a process to enable a regulatory agency to accurately and reliably measure the quality of nursing home care was, at best, difficult. One reason for the difficulty is that there is no single definition for quality of care, no absolute standard and, hence, no single simple method of measurement. The ideal approach would insure that all interested parties - including nursing home residents, residents' families or advocates, care providers, government officials and health care professionals - have input in deciding what is quality and whether, in a given situation, care is "good" or "bad". The desirability of this comprehensive approach, especially in the current fiscal climate of fiscal austerity, must always be weighed against the direct and indirect costs of regulation.

Nursing homes are filled with vulnerable persons who have few community supports, so insuring at least a minimal level of care has been accomplished chiefly through numerous federal and state regulations and inspection requirements. Assessing the quality of care that nursing home residents receive is complicated by several factors:

- -residents unable or unwilling to report problems with their own care;
- -regulations mandating "structure" and "process" but not "outcome"; and,

-predictable government inspections which are highly structured and allow little time for follow-up to any identified problems.

The dilemma, then, was how a regulatory agency can best insure an adequate level of quality in nursing

homes, working within these bounds. The Quality Assurance Project was one innovative alternative toward this end.

III. SUMMARY OF EVENTS SINCE START-UP

In Wisconsin, Bureau of Quality Compliance staff are responsible for regulating long-term care providers of service to private pay, Medicaid and Medicare nursing home residents. Determinations regarding licensure and certification are based on the results of an on-site inspection for compliance with state and federal regulations and on the facility's progress toward correcting violations. In addition the Bureau conducts federally required Medicaid resident reviews.

Federal and state codes specify minimum requirements which nursing homes must meet. When these codes are not met, deficiencies (of federal regulations) or violations (of state regulations) are cited. Federal deficiencies are not classified by severity. However since November 1977, there have been three classifications by which state code violations must be labeled and for which forfeitures may be assessed pursuant to Chapter 50 of the **Wisconsin Statutes.** These are:

- Class A a substantial probability that death or serious mental or physical harm to the resident will result therefrom (forfeiture potential: \$1,000 \$5,000/day);
- Class B directly threatening to the health, safety or welfare of a resident (\$100 \$1,000/day);
- Class C does not directly threaten the health, safety or welfare of a resident (\$10 \$100/day).

Nursing homes must have a plan to correct all violations or deficiencies which is approved by the State (or in some cases the federal agency). In addition, for state violations or federal deficiencies, a range of enforcement options may be invoked when requirements are not met.

During the four years of the demonstration there were various combinations of demonstration and mandated approaches to assessing nursing home care delivery which were in operation throughout the State. Although we attempted to have the existing and demonstration processes remain fairly static, both approaches did change during the demonstration. Since our data analyses compare the existing process to the demonstration methods, an overview of both the "old" and the "new" processes is provided to facilitate understanding of the findings.

A. Wisconsin's Mandated System of Nursing Home Inspection

Years One Through Three, July 1978 - June 1981

During the first three years of the demonstration, the mandated process was a twelve-month cycle which began with a review, called the inspection of care, of all Medicaid recipients in the nursing home. The nurse and social worker, and a physician utilized as needed beginning October 1979, formed the federally required "team" to determine whether (1) the facility's services are adequate to meet the health, rehabilitative, and social needs of each resident, and to promote the resident's maximum physical, mental, and psycho-social functions; and (2) the resident is appropriately placed in the facility. These determinations were often made independently over a two to four week period.

Following the inspection of care, a nurse, social worker, sanitarian and engineer inspected the home for compliance with more than 1,500 state and federal regulations. This annual visit was sometimes spread over a four to six week period, and survey team members often saw very little of each other. Annual visit findings were documented either as "violations/deficiencies" or as "recommendations". Surveyors returned to verify correction of all code violations/deficiencies. Because the survey staff were checking each resident and every code requirement, there was little time for other follow-up.

Chapter 50, **Wisconsin Statutes**, required annual licensure inspections. Although the Bureau carried out some consultation, this was not covered either by state statute or rule. For extreme problems in nursing homes, the Bureau had two surveyors with statewide responsibility to carry out "off hours" (nights, weekends, holidays, etc.) investigations and "special studies" of problems with care delivery systems. During this time, these investigations became known as Special Enforcement Unit activities.

Changes In Year Four, July 1981 - June 1982

By 1981, the Bureau had begun to adopt some QAP concepts into the Bureau's ongoing process. One change in July 1981, was to schedule the state surveyors more compactly to maximize the exchange among team members and lessen the disruption to the nursing home. Under this more efficient schedul-

ing process, team members completed their annual visit within a two-week period.

Another change occurred in January 1982. Although the resident inspection of care was still required for all Medicaid recipients, it was modified to include an indepth review using QAP quality of care indicators for a 10% or a minimum sample of ten of the facility's Medicaid residents. Following the in-depth reviews, standard reviews of the remaining Medicaid residents were done, focussing on problem trends found during the sample reviews.

Chapter 50, **Wisconsin Statutes**, was also amended In March 1982. The annual inspection requirement was replaced with the requirement to inspect at least once each 24 months. Specialized consultation, substantial compliance and good faith reports were added to underscore the State's commitment to a fair enforcement program. It should be noted that although these changes were enacted in the last few months of the demonstration, the concepts had been formally conveyed to survey staff as early as September 1981.

Budget issues began to affect the survey process in the project's fourth year. The Bureau's ability to continue Special Enforcement Unit activities was affected by additional loss of staff. Also, ability to return to verify correction of federal deficiencies was reduced by budget limitations.

One federal statutory change came during the project's final year when the Social Security Act requirement to annually certify Medicare nursing homes was rescinded by Congress. As a practical matter, timing was such that implementation of this change had virtually no impact on the demonstration.

B. QAP Survey Methods

The Quality Assurance Project philosophy was based on the premise that the State should allocate surveyor time so that more time is spent in homes having problems than in homes providing quality care. As an outgrowth of this major premise came two conclusions: first, the State should use its time in homes to concentrate on problem areas; second, the State should apportion time in homes according to the magnitude of the problems. Project methods were based on two additional assumptions: quality of care can be best improved when, in addition to citing, surveyors can choose from a range of actions that will help correct problems; and surveyors should use a

team approach to best assess a home's delivery system(s).

The survey methods used by the Quality Assurance Project were based on this reasoning and were carried out in a two-pronged inspection—facility assessment and resident assessment. The facility screening and resident assessment tools were developed by Wisconsin experts in long-term care from government agencies, academia, and the health care professions. Statisticians from the University of Wisconsin-Madison provided consultation on the validity of the resident sampling plan.

Under the project, nursing homes were assigned to a treatment cell (see Section III C). Only homes in an eligible treatment cell with a history of adequate or better compliance and/or adequate or better resident care could be scheduled to receive a screening and/or sampling inspection.

Years One Through Three, July 1978 - June 1981

Initial federal approval was granted on July 1, 1978, by the Health Care Financing Administration (HCFA), now within the U.S. Department of Health and Human Services. The grant approval permitted the following federal codes to be waived under the authority of Section 1115(a)(1) of the Social Security Act:

 Section 1902(a)(26)(B)(C) and (31)(B)(C)

42 CFR 456.2 (State Plan requirements)
42 CFR 456.609(a)(1)(2) (Determinations by teams)
42 CFR 456.610 (Basis for determinations)

 Section 1902(a)(26)(A)(B)(C) and (31)(A)(B)(C)

42 CFR 456.606 (Frequency of patient review inspections)

3. Section 1902(a)(33)(A)

42 CFR 456.608(a)(1)(2) (Personal contact with and observation of recipients and review of records)

4. Section 1902(a)(28)(33)

42 CFR 442.10 (State Plan requirement Provider Agreements)

42 CFR 442.100 (Certification of SNFs and ICFS - State Plan)

5. Section 1902(a)(33)(B)

42 CFR 442.30(a)(1)(2)(3)(4) and (5) (Agreement as evidence of certification)

6. Section 1902(a)(33)

42 CFR 442.101(d)(1)(2) (Obtaining certification of SNFs and ICFs)
42 CFR 431.610(f)(1)(2) and (g)(1)(i)
(Relations with standard setting and survey agencies)

7. Section 1902(a)(1)

42 CFR 431.50 (Statewideness)

The initial grant approval was as a waiver-only demonstration and did not include approval to screen for the Life Safety Code. It was contingent upon satisfactory fulfillment of a number of conditions. These conditions included: (1) revision of the proposed project budget and administrative structure; (2) preparation of quarterly progress reports; (3) redevelopment of quality considerations and detailed specifications of the screening criteria; (4) expanslon of project operations within the first year to include an urban site; (5) development of an evaluatlon plan for HCFA to use in procuring an independent evaluation of the project; (6) review of project operations under federal codes guaranteeing protection of human subjects; and (7) addition of a gerontologlst having considerable experience in long-term care to project staff.

Conditions one and two were easily met. In response to condition six on protection of human subjects, the project was reviewed annually by an Institutional Review Board convened by the Wisconsin Department of Health and Social Services. Members had no direct interest in the project, and they reviewed project activities in accordance with federal codes governing protection of human subjects.

In response to the condition that the project hire a gerontologist, project staff decided to assemble a panel of persons with expertise in the area of long-term care. This Advisory Panel was composed of 6-10 experts from the Wisconsin long-term care industry, academia, and state personnel. Panel members were initially available to the project two days per month. They also assisted us in meeting other approval conditions by reviewing the quality criteria used in screening and sampling and by developing protocols and interpreting results of our evaluation instrument.

The application for a second year of operation was approved July 1, 1979. This time the authorization included screening for compliance with the Life Safety Codes. Toward the end of the second year, HCFA approved applying QAP screening methods in Medicare homes, an authorization not granted in year one. Application for a third year of operation was approved July 1, 1980. Concurrent with the third year approval, HCFA funded a two-year study of the project by an independent evaluator to assess the effectiveness of QAP methods. This evaluator was Wisconsin Health Care and Research, Inc. (WHCRI).

During the first three years, QAP methods were tested as originally proposed. Two teams simultaneously carried out facility screening and resident sampling. During the facility assessment, surveyors used the facility screening tool to quickly inspect a home in ten care areas and to pinpoint those areas in which the home was having problems. A team approach included a nurse, social worker, sanitarian, and engineer; a practicing nursing home administrator advised the team. During the resident assessment, the team, including a nurse and social worker and physician as needed, selected and reviewed in-depth a random sample of residents of all pay types. When facility surveyors or resident assessors found problems in care given, they collaborated to select from a range of corrective and follow-up actions, working to best match the action to the problem in accordance with a home's past performance and whether the problem had a direct impact on resident care. (See Section IV for a more detailed description of these procedures.)

Changes In Year Four, July 1981-June 1982

Application for the fourth and final year of operation was approved on July 1, 1981. During the fourth year of the demonstration we made basic modifications in procedures. We undertook a systematic reassessment of the successes of the project and chose those areas of need where we felt we could have the largest impact. Our proposed fourth year treatment changes were refinements of our original concept. The project philosophy remained the same.

We modified the facility survey sequence so that the resident assessment preceded facility survey and was done by the same team. Two components of the resident assessment were changed - the sampling plan and assessment indicators of quality of resident care. We introduced use of "core criteria" at scheduling discussions that would suggest when screening and sampling should not be done in order to standardize decisions on when to do a full survey and/or inspection of care. We modified the QAP guidelines on citing state violations. (See Section IV for a more detailed

description of these changes.) In addition to these method changes, we introduced a variant of QAP resident sampling in the project's original demonstration districts toward the end of the fourth year.

C. Experimental Design

The project employed variations of a 2 X 2 factorial design in its demonstration sites around the State. The two options for facility treatment were either the full survey or screening survey; the two options for the resident assessment were either inspection of care or resident sampling. This design is diagrammed in Figure 1 below.

QAP Experimental Treatment Design

Figure 1

		Resident Treatm "Old" Inspection of Care	ent "New" Sampling
Facility	"Old" Full Survey	Old/Old	Old/New
Treatment	"New" Screening Survey	New/Old	New/New

This demonstration design gave us four treatment cells:

- (1) "new" facility screening and "new" resident sampling - N/N,
- (2) "new" facility screening and "old" inspection of care N/O,
- (3) "old" full survey and "new" resident sampling O/N, and
- (4) "old" full survey and "old" inspection of care - O/O. The O/O cell consisted of the mandated methods as implemented by the State of Wisconsin, and homes in this treatment cell functioned as a control group.

In 1978, the demonstration began in the rural districts of Eau Claire, La Crosse, and Wisconsin Rapids. Homes from each of the three districts were randomly assigned to the four treatment cells, and assignment was balanced on nine key variables that might affect home performance. These variables included size, ownership, whether the home had a marginal compliance history, percent of mentally retarded/mentally ill residents, an overall quality rating, and licensure type. In each district, the same surveyors were trained in and carried out all four treatment combinations.

To gain perspective on whether the rural old/old cell was a true control, in 1979 we randomly selected a subgroup of homes from the Fond du Lac district where surveyors had never been trained in QAP methods. In the rural districts, the same surveyors had been trained in and performed both new and old methods, and our experience during the first nine months suggested that when the same surveyors were responsible for both methods, it was difficult to maintain a clean separation between old and new. Therefore, it was important to select an outside group for comparison purposes. All Fond du Lac homes were surveyed O/O.

In 1979, the project expanded into the urban Milwaukee district in response to a condition of our initial approval. Only half the homes in the district were included in the project, and these homes were randomly assigned to one of three groups - new/ new, old/old, and control - using our balanced home selection process described above. The N/N and O/O homes were our two primary treatment groups, and the same surveyors were trained in and performed both old and new survey methods. Because of the previously referenced concern about mixing of methods when the same surveyors were responsible for both old and new methods, we also added a third group of homes as a control group. These homes received the O/O method and were surveyed by surveyors with no training in QAP methods.

The project expanded into the Madison and Green Bay districts in April 1980. These districts were the largest districts not already involved in the project, and this expansion was seen as an opportunity to keep the treatment and control groups "pure". All homes in the Green Bay district were assigned to the N/N treatment cell, and this design permitted us to test the N/N method under more ideal circumstances since surveyors were responsible for only one survey method and all homes were potentially eligible to receive the new method.

Homes in the Madison district were randomly assigned to two treatment methods - N/N and O/N - using the balanced home selection process. QAP wanted to gather more data on the O/N cell, as this alternative appeared the most cost efficient and had not been tested in other than the rural districts. In this district, the project was able for the most part to maintain two separate survey teams with each team trained in and responsible for a single treatment cell.

Accordingly, as of the beginning of the third year the project was operating in a total of six districts - the three rural districts, the urban Milwaukee district, and

two expansion districts; and a total of 247 homes were receiving at least one new survey method. Figure 2 summarizes the survey combinations being applied in demonstration homes at the beginning of the third project year.

Figure 2

SURVEY COMBINATIONS IN DEMONSTRATION HOMES

	Rural							
Facility Assessment	Resident Assessment	Number						
O old	O old	31						
O old	N new	33						
Nnew	O old	31						
N new	N new	28						

	Urban	
Facility Assessment	Resident Assessment	Number
O old	O old	2 0
N new	N new	2 0

	Expansion	
Facility Assessment	Resident Assessment	Number
O old	N new	4 3
N new	N new	92*

*Green Bay
is all N/N

Total Homes Receiving N/N Survey Combination = 140
Total Homes Receiving at Least One New Survey Method = 247
Total Homes in State = 453

After three full years in the project, homes in the rural districts returned to the mandated full survey and inspection of care (O/O) in April 1981. This switch provided an opportunity to validate QAP methods and to gain a more detailed assessment of each home's performance after three years of screening and sampling. Similarly, in March 1982, homes in the urban Milwaukee district returned to full survey and inspection of care after three years of screening and sampling.

In October 1981, the Madison old/new cell reverted to full survey and inspection of care (O/O) so that we would have a within-district control group for data comparisons. In May and June 1982 a variant of QAP sampling was tried in the original La Crosse, Eau Claire and Wisconsin Rapids districts.

Federal approval for first year of demonstration, granted with condi-

D. Summary of Key Dates

July 1, 1978

	tions. Implementation of QAP methods in the rural districts of La Crosse, Eau Claire, and Wisconsin Rapids.
March 1979	Surveyor training and implementation of QAP methods in the urban Milwaukee district.
July 1, 1979	Federal approval for second year of demonstration, included screening for Life Safety Codes and expansion into the Madison and Green Bay districts.
September 1979	Life Safety Code screening training and implementation.
March 13, 1980	Federal approval granted to screen in Medicare homes.
April 1980	Surveyor training and implementa- tion of QAP methods in the Madison and Green Bay expansion districts.
July 1, 1980	Federal approval for third year of demonstration. HCFA grant for an evaluation of QAP awarded to Wis- consin Health Care and Research, Inc.
April 1, 1981	Completion of three years of demonstration in the rural districts. Homes return to mandated survey and inspection of care.
June 1981	Instituted use of core criteria to determine whether to screen or sample.
July 1, 1981	Federal approval for fourth and last year of demonstration.
September and October 1981	Implemented revised QAP resident sampling plan, fourth year QAP survey scenario and revised citing policy.

October 1, Upon completion of one and a half 1981 years of demonstration, former O/N homes in the Madison district returned to O/O cell.

March 1, Completion of three years of demon-1982 stration in the Milwaukee district. Homes returned to the mandated survey and inspection of care.

Rural sampling study initiated in the La Crosse, Eau Claire and Wisconsin Rapids districts.

Termination of QAP methods in the Green Bay district and in N/N homes in the Madison district. Rural sampling study ends.

Termination of field testing.

July 1, 1982 Federal approval of request for three-month extension of the fourth year until September 29, 1982 for completion of data analysis and report writing.

September Termination of all project operations 29, 1982 and administrative staff.

E. Safeguards

May 1, 1982

June 30,

1982

As in any field experiment, there must be controls built into the ongoing demonstration. QAP has employed a number of such safeguards. Basic to the QAP philosophy was the tenet that project methods were an alternative for homes providing average or good quality care and having few compliance problems. Any time there was a past history of marginal compliance or upon finding serious problems, surveyors were instructed to perform the full survey and inspection of care.

The project also emphasized the importance of presurvey planning sessions among surveyors. These planning sessions included a review of a nursing home's past record of violations, its complaint history, and the home's willingness to comply with the regulations. After considering all available facts about an individual home, the surveyors decided whether a home should be surveyed using Quality Assurance Project screening and sampling methods or by the required full survey and/or inspection of care. Surveyors were free to revert to the full or partial survey and inspection of care whenever they found compliance problems. In the fourth year, "core criteria" were developed to suggest when a full review should be scheduled.

Another safeguard built into the project was the concept of a "surprise survey". Surveyors were encouraged to use their time saved on annual visits to return to any facility at any time during the year if there were indications of problems. The surveyors were able to select and focus on specific areas in a home.

In addition, surveys were monitored by QAP and bureau supervisory staff. QAP staff attended district scheduling meetings on a routine basis and observed QAP surveys. Survey packets were read and follow-up actions tracked. Data on surveyor performance were collected daily for monitoring purposes. Also, training needs were identified and procedures were modified through this review and analysis.

Throughout the project, the Advisory Panel and the Institutional Review Board reviewed the project's direction and design. In addition, health care professionals from academia, the nursing home industry and state government assisted in the development of screening and sampling assessment instruments and training guidelines.

The demonstration design in itself provided an important built-in control for the project. It allowed us to make essential comparisons between the demonstration and mandated survey methods and to closely monitor both project development and outcome.

IV. COMPONENTS

Methods and procedures tested by the Quality Assurance Project during its four years can be grouped into eight primary components. These components include strategy/core criteria, team approach/scenarlo, resident sampling, facility screening, use of the advisory nursing home administrator, systems evaluation, time reallocation/follow-up actions, and project administration. Each of these components is described below.

A. Strategy/Core Criteria

Throughout the demonstration, the QAP survey process included a thorough file review and discussion of homes eligible for the new methods. These strategy sessions took place at monthly district office scheduling meetings where surveyors met and discussed the past history of each facility. The first decision made was whether the home should be scheduled for sampling and screening or for an old method survey and inspection of care.

Only good to average quality homes were eligible to receive the new methods. Surveyors used the strategy session to review and categorize a home's past performance. The determination of a home's level of quality was a subjective judgment by surveyors. It was generally based on past violations cited, on the home's willingness to correct previous problems, and on the surveyors' overall assessment of the home.

For the first three years of the demonstration, there were no clear, uniform guidelines for selecting survey methods. However, over time we found wide differences between districts in frequency and rationale for switching to old method full surveys and inspections. As a result, QAP instituted the use of core criteria in spring of 1981. The core criteria were:

- 1. Home is under surveillance.
- 2. Home received a total of 2 or more Class A or B violations on or since the last survey.
- 3. Home is on the Problem Facilities Meeting agenda.
- 4. Home has undergone a change in ownership.
- 5. Home will receive its first annual survey.
- 6. Complaints have been received and substantiated since the last annual survey.

If a home met one or more of the core criteria, it was to be scheduled for a full survey and/or inspection of care. Surveyors could still schedule the home for a screening and sampling survey even if it met a core criterion, but they had to justify in writing the reason for their decision. An additional criterion, added in October 1981 was based on the home's level of care history and mandated that a full inspection of care be scheduled (see Section IV C).

In addition to deciding on the survey method to be used, the strategy session included discussing use of special advisors, scheduling of the advisory nursing home administrator, reviewing survey history and history of setting levels of care, and deciding on the number of days the survey should take.

B. Team Approach/Scenario

The new survey method was based on the team approach in which the nurse, sanitarian and social worker surveyors conducted the survey together. The purpose was to promote maximum communication among the various disciplines about the facility being surveyed, a crucial element in a systems approach to surveying. Communication between disciplines began at the scheduling/strategy meetings as surveyors reviewed the home's history. It continued during the survey as team members met frequently and shared information on the home, and it was completed after the survey when the surveyors discussed findings, actions, and their own performance. The engineer/ architect dld not screen until September 1979.

After trying a rotation system, the sanitarian was designated as the team coordinator. He or she scheduled various meetings during the survey, led surveyor discussion on survey outcomes, took a lead role in directing the advisory nursing home administrator, and kept track of the survey forms.

The QAP survey scenario was revised for the fourth year of the demonstration. During years 1-3 the scenario included a two-team approach. One team, the resident assessment nurse and social worker, conducted resident reviews on a ten percent sample of the home's population. The other team conducted the facility assessment and was composed of a nurse, social worker, registered sanitarian and engineer/architect. Both reviews went on concurrently and lasted 2-3 days.

Years 1-3 Scenario

f ys 1 and 2 (and a metimes (bay 3) Resident assessment team (nurse and social worker) select resident sample (10 percent or a minimum of 10) and complete resident reviews. Physician participates, if scheduled.

Facility assessment team (nurse, sanitarian, social worker, engineer) tour and begin the facility survey, investigating systems problems discovered during resident sampling. Special advisors, including volunteer nursing home administrator, participate if scheduled.

Day 2 (sometimes Day 3) Facility and resident assessment teams meet for pre-exit, complete forms and exit from facility.

For the fourth year of field testing the survey scenario was modified. This modification was made due to the change in sample size and to the need for increased information transfer between the facility and resident assessment teams. The larger sample size in the majority of facilities meant that more time was needed to conduct the resident assessment than was required to conduct the facility assessment. The new scenario accommodated this change by having the resident assessment precede the facility assessment. The new scenario also used one team with the nurse and social worker conducting both the resident and facility assessment. The process lasted five days.

Year Four Scenario

Days 1-3

Nurse and social worker select resident sample (approximately 20) and complete resident reviews. Physician participates, if scheduled.

Days 4-5

Same nurse and social worker, along with the sanitarian and engineer, begin the facility survey, investigating systems problems discovered during resident sampling. Special advisors, including volunteer nursing home administrator, participate if scheduled.

Day 5

Meet for pre-exit, complete forms and exit from facility.

C. Resident Sampling

During its four year tenure, the project tested the viability of sampling as an alternative to the inspection of care. Essentially, surveyors selected at random a sample of all residents in a home (including all pay types). Based on the number of times surveyors disagreed with the home's level of care determination for residents in the sample, the home either passed or failed the sample. Surveyors also had the option to fail the sample based on a more global quality of care assessment, although there were no pre-specified cut-offs for this judgment. If the home passed the sample, no further action was taken. If the home failed the sample, surveyors conducted an inspection of care of all Medicaid residents. A home's past performance at accurately setting care levels was incorporated into the sampling plan, and surveyors used information gained through the sample to assess both quality of care and level of care.

Residents in the sample received an in-depth review. The nurse and social worker began with a team interview of the resident. Following the resident interview, the nurse and social worker each interviewed a facility staff member who was directly involved in the resident's care, and they also conducted a review of the resident's medical chart.

Years One Through Three

QAP tested two variations of the basic sampling plan described above. During years one through three, surveyors drew a 10% sample of the home's entire census or a minimum of 10 residents. Based on the number of incorrect care levels found in the sample, the home either passed the sample, failed the sample, or fell into a borderline category. In the latter case, the home's level of care history then determined the next step. In a home with a good history, no further action was taken. With a borderline history, a second sample was drawn. With a problem history, the home was considered to have failed the initial sample. The level of care history was computed by averaging the last annual review with a composite of all previous reviews.

Year Four

For the fourth and last project year, QAP changed the sample size and simplified the sampling plan. Sample size was based on a variable percentage depending on size of the home—from 50% in a 20-bed home to 4% in a 700-bed home. An average size home of 100 had a sample size increase from 10 to 20. The second sample option was eliminated, and we switched to a single sample with either a pass or fail outcome. Use of the level of care history also changed. We switched to a weighted, three-year average to compute the history, and the history is used on the front end as a "core criterion" to determine whether to sample (in good or average homes), to apply a more stringent

pass/fail criterion (in borderline homes) or to not sample (in problem homes). The more stringent pass/fail criterion involved increasing the sample size to the next larger category and still applying the pass/fail cut-offs of the original sample size.

We also developed a resident assessment tool that better delineated problems in quality of care and that would lead the surveyors to more specific follow-up actions on quality problems found. We used bureau staff and members of our Advisory Panel in this effort.

The revised fourth year sample sizes were to be used only in homes with a borderline or better history and are shown below:

		Increased
		Sample
		Size Due to
Home Census	Sample Size	Borderline History
1-10	All	NA
11-20	10	15
21-40	15	20
41-125	20	25
126-349	25	30
350-700	30	35

Sampling in the Rural Districts

In May 1982, the project reintroduced resident sampling in the three rural districts of La Crosse, Eau Claire, and Wisconsin Rapids. A full year had elapsed since the districts had completed three years in the demonstration (as of April 1981), and all homes had received a full survey and inspection of care during the year. Effective May 1, 1982 and continuing until June 30, 1982, all homes in the districts became zeligible for QAP sampling.

The decision to reintroduce sampling was initiated upon completion of a study by the Department's Bureau of Evaluation. The study had found unexpected differences between QAP and the mandated method in the percentage of residents whom surveyors judged to be incorrectly placed at a skilled (SNF) level of care. Specifically, QAP surveyors were making a greater net reduction in SNF residents than were surveyors using the inspection of care. However, it was not clear whether this difference was due to the sampling process itself or to the QAP in-depth resident review. Therefore, to test these two factors, the project tested the inspection of care method on a sample basis in the rural districts. Surveyors followed QAP fourth year guidelines in drawing the sample and used QAP cut-offs in passing or failing the sample. However, sampled residents were reviewed per guidelines specified under the mandated method as opposed to QAP in-depth review procedures.

D. Facility Screening

A primary component of the Quality Assurance Project was facility screening. It was an alternative to the full survey, which in Wisconsin, involves a checklist of more than 1500 state and federal codes. Screening was a quicker method of conducting the facility survey and was designed to be used in homes of average or better quality.

QAP's facility assessment involved screening in ten key areas. These ten areas had been identified at the onset of the demonstration by Wisconsin health care professionals and experts in long-term care. Items reviewed during screening focused more on quality of care delivery and less on paperwork requirements. The ten areas included resident condition, care management, facility safety, facility environment, resident importance, dietary, staff, professional ties, management, and philosophy. After the ten key areas were assessed, surveyor time was directed at investigating concerns or problems identified during screening, and surveyors chose from a variety of follow-up actions for remedying problems.

The screening process took approximately two days and was done by the nurse, sanitarian, social worker and engineer/architect. Surveyors were to communicate with each other about problems found during screening.

E. Advisory Nursing Home Administrator

A part of the new survey method for all four years of the demonstration was the involvement of an active nursing home administrator in the facility assessment process. In keeping with the screening and systems approach to surveying, the advisory administrator's role was to provide management and administrative expertise to surveyors, helping them identify overall problems and causes.

Advisory nursing home administrators were scheduled by QAP staff. Surveyors chose the day of the facility assessment on which they would like the administrator present. The sanitarian, as team coordinator, instructed the advisory administrator regarding areas on which he or she should focus in a particular facility. The advisory administrator then completed a facility screening and summarized findings in a report to the survey team.

Active nursing home administrators could volunteer for involvement in QAP, but most were nominated by their professional association. QAP staff screened all administrators using pre-established criteria and provided annual update sessions. Advisory administrators were reimbursed for expenses and received continuing education credits for participation in training and surveys.

F. Systems Evaluation

Integral to the QAP survey process was the concept of a systems approach to surveying. With the systems approach to survey, emphasis was taken off individual code violations and placed on evaluating a facility's overall system. When problems were identified, surveyors attempted to locate the cause or source of the problems and then chose the most effective technique for resolving them.

The systems approach required communication between surveyors about findings, as minor problems might tie into a systems problem which crossed discipline lines. After tracing problems to a cause, problems were grouped into systems areas. One problem area might include many code violations and/or non code related items.

G. Time Reallocation/Follow-up Actions

The screening and sampling survey model saved time in good quality homes and allowed for time to be redirected to lower quality nursing homes in order to upgrade their care. This reallocation was a more efficient use of available resources based on need rather than spending the same amount of time in each home irrespective of its quality.

In homes which had been screened or sampled, surveyors chose from a variety of follow-up actions based on what they determined to be appropriate. Surveyors might choose among the following actions when they found problems:

- investigate further—the surveyor might opt to return to the home at a future date if he or she did not have enough information to make a judgement.
- counsel—the surveyor could provide information at the time of the survey if he or she felt it would help correct a problem in a certain area.

- refer a state consultant—if the home could benefit from help in a certain area, e.g., nutrition, the surveyor could refer a state consultant to the home or provide consultation himself.
- survey for violations and cite—the surveyor might use parts or all of the full code checklist after the initial screening and a notice of violation would be issued.
- sample further or review all residents—if more information was needed to assess the home's quality of care, surveyors could review more or all residents.
- schedule a special advisor—the surveyor might ask a special advisor to further investigate a specific area.
- take no further action—screening and sampling might show no need for further action at the time.
- conduct a surprise survey—a surprise survey might be scheduled any time during the year by one or more surveyors.

Under the mandated methods all state and federal rules must be checked each year in nursing homes, and some relate to written policies, contracts and other documentation requirements. In QAP screening and sampling, by contrast, surveyors were looking at care given. Thus, the project hypothesized that surveyors would cite fewer codes where resident care was not directly threatened using the screening and sampling approaches. Serious code violations, however, would be cited.

In a facility with a history of good quality of care, compliance with the regulations and receptivity to state actions, surveyors considered other options as well as citing when problems were found that did not threaten resident well-being. For example, the QAP survey team might find a limited activities program in a certain nursing home. The newly hired activities director is inexperienced but willing to learn and the administrator has responded positively to state recommendations in the past. Rather than scrutinizing activity department paperwork at this time for possible code violations, the QAP surveyors would provide consultation and monitor progress through additional follow-up visits. All problems found would be documented and surveyors would return to verify that the problems were corrected.

The same problem in another home might result in a different state action. If the activity director has been in the facility for years and has always shown little interest in new ideas and if the administrator has not

been supportive of state recommendations, the surveyor would cite all deficient state and federal codes. Surveyors would still offer to provide consultation, but this offer would probably be met with little enthusiasm.

In a home with a history of poor quality care or problem compliance, surveyors would not screen but instead would perform a full survey. All violations would be cited. Determinations regarding licensure/certification would be based on the results of the survey and on the facility's progress toward correcting violations. Chapter 50 enforcement actions would be invoked when conditions specified in the statute were not met.

In the fourth year of the demonstration, the project changed its guidelines on citing. Surveyors were instructed to cite all state code violations observed during screening, including those not directly threatening resident care. This change altered the option to deal with non-serious state violations with actions other than citing.

H. Administration

The demonstration was administered by a group of project employees (seven full time equivalents as of the end of the demonstration) located in the central office of the Bureau of Quality Compliance. QAP staff operated outside of bureau lines, although close communication was always maintained between QAP operations and bureau staff.

There were two units under the project director. One unit, the monitoring section, was responsible for collecting and analyzing data for purposes of monitoring the project and for acting as a liaison with the independent evaluator, WHCRI. The other unit, field operations, developed policies and procedures, trained field staff, monitored survey scheduling, observed surveys and reviewed survey and resident assessment reports.

The Bureau of Quality Compliance is charged with monitoring the quality of institutional health care ser-

vices in the State. In carrying out that charge, the Bureau is responsible for the enforcement of both federal and state laws. From July 1978 - June 1979, approximately 23% of the Bureau's total activity was devoted to state-related functions. Activities related to the federal Medicare Program accounted for about 11% of the Bureau's effort, and the remainder (66%) was spent on Medicaid-related activities.

The Bureau has had between five and six program sections during the course of the demonstration. Three sections, which have remained relatively static, have staff which participate in QAP surveys.

The Long-Term Care Section is the largest and has the most complex structure. This section has been plagued by supervisory vacancies due to budget constraints. At the end of QAP's fourth year, the section chief supervised three nurse supervisors, who in turn supervised twenty-nine nurses in six district offices around the State; and a sanitarian supervisor, who in turn supervised seven nurses and four social workers In one district office and fourteen sanitarians in eight district offices. For several years, the section chief has also acted as social worker supervisor for nineteen social workers in six district offices.

The Chief of the Special Resources Section supervises the consultants who serve as special advisors on QAP surveys. At the start of the demonstration, two occupational therapists, two physical therapists, two speech and hearing consultants, two physicians, one geriatric nurse practitioner, one rehabilitation nurse, one pharmacy consultant and one medical records consultant were on staff, located in central office and in four district offices around the State. At the end of the demonstration, only the pharmacy and medical records consultants remained, and access to physicians was provided through contracts on an asneeded basis.

The Chief of the Facilities Need Analysis Section, at the close of the demonstration, supervised ten architects/engineers located in the Bureau's central office and in two district offices. These staff have statewide responsibility for surveying long-term and acute care facilities and performing plan reviews.

V. HYPOTHESES

The primary objective of the demonstration project was to improve the effectiveness of the facility survey and the resident assessment using existing resources. The foremost hypothesis was that greater improvement in quality of care would be found in homes reviewed with the new methods than would be found in homes reviewed by traditional methods. At Its outset, the project established 14 hypotheses.

Seven hypotheses are associated with the screening survey:

- (1) The improvement in quality of care in homes surveyed with the facility screening tool will be greater than in homes surveyed with the mandated method.
- (2) Enforcement actions brought against homes surveyed with the new method will be more specific than those brought against homes surveyed with the mandated method.
- (3) Facility survey teams using the new survey will spend less total time reviewing "good" homes than when using the mandated method.
- (4) Facility survey teams using the new survey will spend more total time reviewing "bad" homes than when using the mandated method.
- (5) Average cost of the facility review process for the demonstration homes will not be different than for homes receiving the mandated method.
- (6) The average frequency of visits to a nursing home annually will be greater with demonstration method than with mandated method.
- (7) The nursing homes reviewed with the new survey will be more satisfied than homes reviewed with the mandated method.

Five hypotheses are associated with resident sampling:

- (8) The improvement in quality of care in homes reviewed with resident sampling will be greater than in homes given the mandated inspection of care.
- (9) Teams using sampling will spend less time evaluating "good" homes than when using the mandated inspection of care.
- (10) Teams using sampling will spend more time evaluating "bad" homes than when using the mandated inspection of care.
- (11) No differences will be noted in the rate at which resident placement or level of care decisions are revised under either resident assessment method.
- (12) The nursing homes reviewed with sampling will be more satisfied than homes reviewed with the inspection of care.

Two hypotheses are made about the two demonstration methods in combination:

- (13) The improvement in quality of care found in homes reviewed with both new methods will be greater than found in homes reviewed with the mandated methods.
- (14) Enforcement and corrective actions brought as a result of review using both new methods will be more successful than when mandated methods are used.

VI. STUDIES AND FINDINGS

Although a large number of diverse data studies were conducted by the project during its four years, we do not have data which measure all of the original 14 hypotheses. Much of QAP data collection was focused on monitoring the process of implementation as opposed to measuring outcome of the methods. In additlon, as the project progressed, emphasis on the mixed treatment cells (N/O, O/N) lessened, and the N/N and O/O cells were given increasing importance. Thus, few data studies were conducted which specifically isolated the effect of facility screening apart from resident sampling. Most studies compared the primary N/N experimental cell with the O/O control group. (Note: In all data studies reported in this sectlon, we use the abbreviated terminology of new/new (N/N), new/old (N/O), old/new (O/N), and old/ old (O/O) for ease of reference. See Section III C for a more detailed description of the project's four treatment cells.)

Much of the data collected by QAP, however, address these hypotheses either directly or indirectly. Rather than discuss each hypothesis separately, the hypotheses are grouped into categories of related content. We then present data studies which address all or part of the cluster of hypotheses. In the data studies conducted by QAP, violations/deficiencies cited and follow-up actions by engineers are excluded since few engineer surveyors employed QAP screening methods.

An Independent evaluation was carried out from July 1980-June 1982 by Wisconsin Health Care and Research, Inc. (WHCRI). WHCRI researched ten issues concerning project achievements. These studies included improvements in quality of care, problem detection, federal and state survey comparisons, level of care, surveyor time allocation, surveyor interventions, problem correction, cost of compliance, and acceptability of methods. Results of these studies are described in the evaluator's final report.

A. Improved Quality of Care

Four hypotheses focus on the broad outcome of improvement in quality of care, including successful use of enforcement actions to improve that quality.

 The improvement in quality of care in homes surveyed with the facility screening tool will be greater than in homes surveyed with the mandated method.

- The improvement in quality of care in homes reviewed with resident sampling will be greater than in homes given the mandated inspection of care.
- The improvement in quality of care found in homes reviewed with both new methods will be greater than found in homes reviewed with the mandated methods.
- Enforcement and corrective actions brought as a result of review using both new methods will be more successful than when mandated methods are used.

The following two data studies address these hypotheses.

A Comparison of Frequency of Repeated Problems in New and Old Method Homes

Study Intent

The purpose of the study was to determine whether new method surveys result in fewer repeated problems from one annual survey to the next as compared to old method surveys. Problems were defined as any shortcoming (code and non-code related) identified by surveyors in the home and formally reported by the Bureau of Quality Compliance. A "repeat" was a problem involving the same category of health care provider, the same deficient action or process and the same outcome or potential outcome.

Thirty-two homes from the rural districts and 13 homes from the Fond du Lac district were included in the study. From the three rural districts, 18 homes were N/N and 14 homes were O/O. The 13 homes from the Fond du Lac district were O/O homes which were used as an additional comparison group.

The time period covered by the study was restricted to 1978 and 1979. During these years, both QAP and the Bureau of Quality Compliance surveyor assignments rotated between annual surveys. In the preceding and subsequent year, surveyor rotation did not occur in both methods, and this difference could potentially contaminate the results of the study. Sinc different surveyors have different priorities and style in problem identification, it semed likely that having the same or different surveyors from year to year could increase or decrease the probability of having the same problems reported.

Findings

A chi-square analysis was used to test the significance of the observed differences in frequency of repeated problems. Results are shown in Table 1.

Table 1

Comparison of Frequency of Repeated Problems Identified in N/N, O/O and Control Homes in 1979

	TREATM	ENT CELL	
	N/N	0/0	
No repeat	208	150	
Repeat	30	21	
			$X^2 = .0094*$
	N/N	Control	
No repeat	208	193	
Repeat	30	14	
			$X^2 = 4.2397**$
	0/0	Control	
No repeat	150	193	
Repeat	21	14	
			V2 0.000#

- $X^2 = 3.393^*$
- * Not significant at .05 level.
- ** Significant at .05 level.

Conclusions

Generally speaking, these findings suggest no difference between survey methods in their ability to reduce the frequency of repeated problems. In the rural districts, the difference in frequency of repeat problems between N/N and O/O homes was non-signlficant. In addition, the difference in frequency of repeat problems in O/O homes in the rural districts as compared to O/O homes in the Fond du Lac district was non-significant. However, surveyors reported significantly more repeat problems in rural homes surveyed by the N/N method as compared to Fond du Lac homes surveyed by O/O method. This finding is difficult to interpret since it may be due to differences in the survey method, differences between districts, or to an interaction between survey method and district.

Post-Monitoring of Citations Issued in the Rural Districts

Study Intent

For three years - April 1978 through March 1981 - the project tested its four treatment cells in the rural districts of La Crosse, Eau Claire, and Wisconsin Rapids. All homes in each of the districts were randomly assigned to the N/N, N/O, O/N, and O/O cells. In April 1981, the districts returned to the full survey and inspection of care.

From April 1981 through March 1982, QAP monitored the performance of the homes on the surveys following their participation in the project. As an indicator of quality of the homes, frequency of violations/deficiencies cited and class of violations were tabulated, and results were compared based on the homes' previous treatment cells. This comparison would provide an indicator of the relative status of QAP homes after three years of demonstration.

FIndings

Post-monitoring results are shown in Table 2.

Table 2

Post-Monitoring of Citations Issued in the Rural Districts, April 1981 - March 1982

Previous QA Treatment		ss of Viol	ation	Fed. Deficiency	
Cell	Α	В	С	Only	Total
N/N (28)	0	.2	6.8	1.5	8.5
N/O (30)	0	.2	6.5	1.4	8.2
O/N (30)	0	.1	6.9	1.3	8.3
0/0 (32)	0	.3	6.9	1.6	8.8

A comparison of frequency of deficiencies/violations cited shows negligible differences between former treatment cells for any class of violation or federal-only deficiency. No Class A violations were cited in any cell. Average number of Class B violations was small in all cells, ranging from .3 in O/O homes to .1 in O/N homes. Average number of Class C violations was essentially the same in all former cells, ranging from 6.5 in N/O homes to 6.9 in O/N and O/O homes. Average number of federal-only citations was also very similar between cells, ranging from 1.3 in O/N homes to 1.6 in O/O homes. As a result, homes in all former treatment cells averaged a total of approximately eight violations/deficiencies per home.

Conclusions

Using frequency of citations as a proxy measure for quality of care, it appears that there is no difference between homes based on their previous survey and inspection methods. Thus, homes that received QAP screening and sampling methods did not improve or deteriorate as compared to homes which received full survey and inspection of care.

B. Surveyor Time Reallocation

The following hypotheses address the concept of surveyor time allocation based on quality of the home.

- Facility survey teams using the new screening survey will spend less total time reviewing "good" homes than when using the mandated method.
- Facility survey teams using the new screening survey will spend more total time reviewing "bad" homes than when using the mandated method.
- Teams using resident sampling will spend less time evaluating "good" homes than when performing the mandated inspection of care.
- Teams using resident sampling will spend more time evaluating "bad" homes than when performing the mandated inspection of care.

The data study described below addresses the extent to which the project met these hypotheses.

Surveyor Time Reallocation by Quality of Home Study Intent

A time study to gain further insight into the validity of the original hypotheses was developed using existing Bureau of Quality Compliance staff resources which included the computerized monthly time and activity reports for all employees and assistance from the Department's Office of Information Systems.

This study compares N/N method surveys in the fadison and Green Bay districts and O/O surveys in the non-QAP districts of Fond du Lac, Rhinelander and part of Milwaukee. This design was chosen in part I ecause of the reduced probability of surveyors being assigned to cover both O/O and N/N surveys. Time if ported by surveyors from other districts or by buriau consultants who assisted on any survey was also litilized.

The time period of the study covers annual surveys between June 1980 and April 1981 (excluding January 1981, for which accurate computer printouts were not available at the time of the study). Data from May 1980 was included to pick up resident review time where surveyors enter homes prior to their June survey. May and June 1981 activity reports also were included so that all follow-up activities for annual surveys near the end of the study period would be included.

Quality ratings were gathered for each home in the study. These ratings were derived from subjective surveyor ratings of each home and were obtained from WHCRI. They were updated by QAP and bureau staff to reflect recent changes in each home's status

FIndings

Results are summarized in Table 3 which shows the average number of hours spent per home by activity category in homes of varying quality under the N/N and O/O survey methods.

A comparison of average number of hours spent in good homes suggests that QAP surveyors spend less time than old method surveyors in only two of eight activity categories. QAP surveyors spend less time on facility surveys (67.1 N/N vs. 80.8 O/O) and complaint investigation (4.3 N/N vs. 7.1 O/O). However, comparison of good homes under N/N and O/O methods is confounded by the large difference in average bed size, 107.5 beds in N/N homes and 144.8 beds in O/O homes. The net effect of this difference would be to reduce hours spent in N/N homes based on size alone. In spite of the size difference, O/O surveyors still spend less time in the two categories of verification activities and consultation.

The comparison of time spent on resident review in good homes is complicated by differences in both home size and number of Medicaid residents. QAP sample size is determined by the home's total census, whereas old method workload is determined by total number of Medicaid residents. QAP and old method homes with a quality rating of good differ both on total census and number of Medicaid residents. In spite of the lack of comparability in number of residents, QAP surveyors spent only 3.6 fewer hours (61.1) than did old method surveyors (67.7) on resident review in homes that had 26% fewer total residents (107.55 in N/N homes and 144.8 in O/O homes) and 32% fewer Medicaid residents (52.6 in N/N homes and 77.5 in O/O homes). As a result, QAP surveyors spent proportionately more time on resident review in good homes than did old method surveyors.

A Comparison Of Time Allocation By
Quality Of Home For QAP And Non-QAP Surveyors

In 1980 And 1981

Table 3

Average Number of Hours

	ity (Home-Related)	
2		

			^		in			<u>.</u> @				
	Facility	y Perificati	ies compla	nation Consult	atic Legaliti	ies Office	+ Surveille	iles Residen	h Anerade	ours Hone	Page Co	te Average
Survey Method/ Quality of Home	Facilitye	Action	Canon	Conse.	LACTI	Official	, Se Activ	iles peside	BY OLO.	#1/20	A Beo	AMEC
N/N Method									· · · · · · · · · · · · · · · · · · ·			
Good	67.1	9.4	4.3	11.3	0	1.7	0	61.1	154.8	16	107.5	52.6
Medium	73.3	9.2	5.4	11.3	1.3	1.8	.33	66.9	169.6	48	118.0	73.0
Problem	94.1	15.4	13.5	24.8	13.3	5.3	12.9	73.4	252.6	7	121.4	74.6
Overall N/N	73.9	9.9	5.9	12.6	1.5	2.2	2.1	66.2	174.4	71	116.0	68.5
O/O Method		· · · · ·										
Good	80.8	7.7	7.1	9.1	0	2.5	0	64.7	171.8	8	144.8	77.5
Medium	83.1	7.4	1.3	9.0	1.4	1.8	.3	94.0	198.2	53	117.9	83.3
Problem	94.2	23.6	50.0	15.7	2.3	8.9	2.3	135.4	332.2	8	114.5	86.4
Overall O/O	84.1	9.3	7.6	9.8	1.3	2.7	.5	95.4	210.7	69	120.6	83.0

On the remaining three activity categories—office work, surveillance, and legal activities, there was little or no difference between the methods on time spent in good homes. New method surveyors spent 1.7 hours on home-specific office work as compared to 2.5 hours by old method surveyors, a difference that could be due to home size alone. No time was spent on surveillance or legal activities by either method.

Both N/N and O/O method surveyors reallocate their time as quality of the home decreases. As quality declines, both methods increase the amount of time spent in each of the eight activity categories - facility survey, verification activities, complaint investigation, consultation, legal activities, office work, surveillance activities, and resident review. It should be noted that in N/N method homes, there is also an increase in average bed size from good to poor quality homes which would partially account for the corresponding increase in time. However, the average size difference does not appear large enough to refute the observed reallocation effect under the N/N method.

The two methods differ in their respective patterns of reallocated activities. QAP surveyors show a larger reallocation of time to problem homes on consultation/inservice (from 11.3 hours in good homes to 24.8 hours in poor homes), legal activities (from 0 hours in good homes to 13.3 hours in poor homes),

and surveillance activities (from 0 hours in good homes to 12.9 hours in poor homes) than do 0/0 method surveyors. Old method surveyors show a larger reallocation of time to problem homes on verification activities (from 7.7 in good homes to 23.6 hours in poor homes), complaint investigation (from 7.1 hours in good homes to 50 hours in poor homes), and resident review (from 64.7 hours in good homes to 135.4 hours in poor homes) than do N/N method surveyors. The difference in number of Medicaid residents in good and problem homes under the old method does not negate the finding of surveyor time reallocation. Although number of Medicaid residents increased 11% (from 77.5 to 86.4), the number of hours allocated increased 109% (from 64.7 to 135.4).

When average total time is compared by survey method, two significant trends become apparent. First, O/O method surveyors show a greater reallocation of time by quality of home than do QAP surveyors. Old method surveyors spend 171.8 average total hours on good homes and 332.2 hours on poor homes, an increase of 93%. This increase in time is particularly striking in old method homes since the average bed size drops from 144.8 beds in the good homes to 114.5 beds in poor homes, and smaller homes would typically require less total time. In contrast, QAP surveyors spend an average of 154.8 total

hours on good homes and 252.6 total hours on poor homes, an increase of 63%.

Second, QAP surveyors spend less total time than O/O method surveyors. They spend less total time in homes in each of the quality categories, and they spend less total time across all quality categories than do O/O method surveyors. A comparison of total survey hours per home under N/N and O/O methods shows that N/N surveyors spend 36.3 fewer total hours per home than do old method surveyors (174.4 hours N/N vs. 210.7 hours O/O). Therefore, QAP surveyors are not reallocating all of the time saved.

Conclusions

Results of the QAP study lend support to the following conclusions:

- 1. The hypothesis that QAP surveyors would spend less time than old method surveyors in good homes was partially met. In good homes, QAP surveyors spend less time on facility survey and complaint investigation than old method surveyors. However, QAP surveyors spend more time than O/O method surveyors on interim visits in good homes, specifically on verification activities and consultation/inservice. They also spend proportionately more time on resident review in good homes as do old method surveyors.
- 2. The hypothesis that QAP surveyors would spend more time in poor quality homes than old method surveyors was not met. In poor quality homes, QAP surveyors spent more time only on consultation/inservice, legal actlvities, and surveillance. However, old method surveyors spent more time on verification activities, office work, and resident review and more time overall.
- 3. The hypothesis that QAP surveyors would reallocate their time based on quality of the home was met. This reallocation was observed in all activity categories. However, old method surveyors demonstrated an even greater reallocation of time based on quality of the home than did QAP surveyors.
- 4. The hypothesis that QAP surveyors would spend the same amount of average total time as old method surveyors was not met. QAP surveyors spent less time in homes overall as well as less total time in homes in each of the quality categories. Thus, QAP surveyors are spending less time rather than reallocating their time savings. QAP surveyors reduced

total time by 17% as compared to old method surveyors.

C. Use of Surveyor Follow-Up Actions

 The average frequency of visits to a nursing home annually will be greater with demonstration methods than with mandated methods.

The following two studies assess the project's success in meeting this hypothesis.

Surveyor Use of Surprise Surveys

Study Intent

Under QAP guldelines, surveyors are encouraged to conduct surprise surveys in homes where problems had been found during the recent annual survey. Surprise surveys may also be conducted if there is a change in the status of the home or in response to a complaint. Surprise surveys are used in any home eligible for one or more new treatment methods and conducted by one or more survey team members. Under the old method, the parallel to the QAP surprise survey is the interim survey which is typically conducted to investigate complaints.

As a part of routine monitoring, QAP staff have tabulated number of surprise and interim surveys conducted in homes eligible for the new methods and in homes assigned to the old methods. A comparison of results enabled the project to assess whether QAP surveyors were conducting more surprise/interim surveys than were non-QAP surveyors.

FIndings

Table 4 shows the percent of homes receiving surprise or interim surveys in QAP districts during calendar years 1980 and 1981. Results are separated by district and treatment cell. No results are shown for the original rural districts for 1981 since these districts participated in the project for only three months in 1981, and the resulting small numbers of homes in the individual cells cannot represent any meaningful trends. The number shown in parentheses is the number of homes in the treatment cell during the specified time period.

Results are mixed and vary both by district and by year. In the Madison, Milwaukee, Eau Claire and Wisconsin Rapids districts, QAP surveyors tended to

conduct more surprise/interim surveys during 1980 than did non-QAP surveyors. In district 1, 42% of the N/N homes received a surprise/interim survey versus 32% of the O/N homes. In district 2, 50% of the N/N homes received surprise/interim surveys versus 26% in O/O homes and 32% in control homes. In district 6, surprise/interim surveys in all new method cells (N/N - 31%; N/O - 71%; O/N - 40%) exceeded the surprise/interim surveys conducted in O/O homes (13%). In district 7, surprise surveys in all new method cells (N/N - 80%; N/O - 100%; O/ N - 14%) exceeded the surprise/interim surveys conducted in the O/O homes (13%). However, in district 5, 50% of the homes in the O/O and O/N treatment cells received surprise/interim surveys versus 40% of the N/N homes and 17% of the N/O homes.

Table 4

Percentage of Homes Receiving Surprise/Interim
Surveys in QAP Districts in 1980 and 1981

				Υe	ear	
Di	strict#/Name	Cell	198	30	19	81
1	Madison	N/N O/N	42% 32%	(26) (31)	42% 29%	(38) (31)
2	Milwaukee	N/N O/O Control	50 % 26 % 32 %	(20) (19) (25)	35% 53% 16%	(20) (19) (25)
4	Green Bay	N/N	42%	(38)	22%	(50)
5	La Crosse	N/N N/O O/N O/O	40 % 17 % 50 % 50 %	(5) (6) (6) (4)		
6	Eau Claire	N/N N/O O/N O/O	31% 71% 40% 13%	(16) (17) (15) (15)		
7	Wisconsin Rapids	N/N N/O O/N O/O	80 % 100 % 14 % 13 %	(5) (5) (7) (8)		

In 1981, QAP surveyors showed a relative decrease in surprise/interim surveys. In district 2, 53% of the O/O homes received surprise/interim surveys versus 35% of the N/N homes. In district 4, percent of surprise/interim surveys dropped from 42% in 1980 to 22% in 1981. However, in district 1, N/N homes continued to receive more surprise/interim visits (42%) than did O/N homes (29%).

Conclusions

QAP homes tended to receive more surprise/interim surveys than non-QAP homes. However, this trend was not pronounced and tended to vary both by district and by year. In 1980, QAP surveyors clearly conducted more surprise/interim surveys than non-QAP surveyors in all districts except La Crosse. In 1981, use of surprise/interim surveys declined somewhat in QAP homes, and of the two districts tallied, only Madison district surveyors were conducting more surprise/interim surveys in QAP homes as compared to non-QAP homes.

A Comparison of Surveyor Use of Follow-Up Actions Before and After the Change in QAP Citing Policy

As a part of routine monitoring, QAP staff have tabulated the number and type of follow-up actions conducted by QAP and non-QAP surveyors. This monitoring enabled us to assess whether QAP surveyors were conducting more follow-up visits in new method homes and what types of actions were being conducted.

In the demonstration districts, tallies during our first three years showed that QAP surveyors consistently conducted more follow-up actions per home than did non-QAP surveyors. The actions most frequently conducted by QAP surveyors were consultation/inservice and verification activities (return to verify problem correction and verification visits for violations Issued). Relatively little use was made of special advisors. With the exception of the first year in the rural districts, relatively little use was made of further investigation. As QAP moved into the expansion districts of Green Bay and Madison, verification activities became the most predominant form of follow-up action. Thus, although QAP surveyors were conducting more total actions per home, these actions tended to be traditional in nature and relatively little use was made of the more innovative QAP actions.

Study Intent

The purpose of the study was to monitor the impact of the change in QAP citing policy on surveyor use of alternate follow-up actions. From the outset, QAP encouraged surveyors to use a wider range of actions above and beyond citing to correct problems and improve quality of care. Actions were to be based on the total systems perspective, and selection of corrective measures was matched to the problem. On October 1, 1981, QAP came into conformance with the bureau policy which required citing of all violations of state codes. QAP did not change its federal citing policy.

Although QAP did not change its guidelines on use of alternate actions, we anticipated that their use might be affected by the change in citing policy on state codes. We were concerned that the change might reduce the number of alternate actions conducted by surveyors. Although alternate actions could still be used on both code violations and non-code problems, they could no longer substitute for issuing violations of non-serious state Class C codes. In the latter case, alternate actions must be undertaken in addition to citing.

To measure the effect of the change in policy, we tabulated number and type of follow-up actions taken in the six months prior to the change (April-September 1981) as compared to the first five months after the change (October 1981 - February 1982). (No data were available for March 1982, at the time of preparation of this report.) Results were collected from all QAP districts - Green Bay, Madison and Milwaukee.

Findings

Results from the expansion districts are shown in Table 5.

When the change in QAP's policy on citing state codes took effect on October 1, there was little change in use of alternate actions by Green Bay surveyors. The pattern of reliance on verification activities continued; surveyors conducted 1.3 return to verify and 1.8 verification visits per home. Surveyors continued to make little use of consultation and no use of special advisors and investigate further. The total number of actions per home, 3.4, remained virtually unchanged.

In the Madison district, the change in QAP citing policy was accompanied by a change in use of alternate actions. All actions except verification visits were discontinued. Use of consultation dropped from .4 per home to zero. Use of special advisors and investigate further had dropped to zero prior to the change in citing policy and remained at zero after the change. Average number of verification visits per home rose from 1.6 to 2.6. The net effect was a decline in total number of actions taken, dropping from 4.8 to 2.6 per home.

In the Madison district, data were also collected for O/N homes which returned to the O/O treatment cell on October 1, 1981. These homes constitute a "con-

Table 5

Use of Surveyor Follow-Up Actions in the Expansion
Districts Before and After the Change in QAP Citing Policy

Dist./Treatment Cell/Time Period	AVERAGE NUMBER OF ACTIONS PER HOME								
	Number of Homes	Consult- ation Inservice	Special Advisor	Invest- igate Further	Return to Verify Problem Correction	Citation Verification Visit	Total Actions		
Green Bay-N/N									
4/81-9/81	26	.4	0	0	1.5	1.4	3.3		
VS.	0.5	0	0	0	4.0	4.0	0.4		
10/81-2/82	25	.3	0	0	1.3	1.8	3.4		
Madison-N/N	10	4	0	0	0.0	1.0	4.0		
4/81-9/81 vs.	18	.4	0	0	2.8	1.6	4.8		
10/81-2/82	16	0	0	0	0	2.6	2.6		
Madison-O/N									
O/N 4/81-9/81	19	.2	0	0	.2	1.9	2.3		
VS.									
0/0 10/81-2/82	16	.3	0	0	0	2.1	2.4		

trol group" since follow-up actions are typically associated with the facility survey, and these homes received the old facility survey method for the duration of the data collection period.

A comparison of old and new method homes in the Madison district reveals two key findings. First, before the fourth year change in QAP citing, N/N surveyors were conducting more total actions per home (4.8) than were O/N surveyors (2.3). Second, after the change in citing policy, the pattern and frequency of use of alternate actions by N/N surveyors changed to match that of O/O surveyors. Total number of actions conducted were similar, 2.6 per N/N home and 2.4 per O/O home. In addition, both methods were relying on verification visits, 2.6 per N/N home and 2.1 per O/O home. Few consultations were conducted by O/O surveyors (.3), but none were conducted by N/N surveyors.

A comparison of O/N homes in the first six months to O/O homes in the subsequent five months shows little or no change in pattern of use or frequency of use of follow-up actions. This outcome is in line with our expectations since there were no changes in policy which would affect use of follow-up actions in the homes.

Equivalent findings from the Milwaukee district are shown in Table 6.

When QAP implemented the fourth year change in citing, the pattern and frequency of use of alternate actions remained relatively unchanged in Milwaukee N/N homes. Surveyors continued to omit any use of consultation/inservice or special advisors. Use of investigate further dropped from .7 per home to zero. Use of return to verify remained stable, from 1.6 to 1.8 per home. Use of verification visits showed a small increase, from .8 to 1.5 per home. The net effect was little change in total use of actions, from 3.1 per home to 3.3.

A comparison of N/N homes to O/O and control homes reveals both differences and similarities. First, although QAP surveyors were relying on the traditional verification activities, they were still consistently conducting somewhat more total follow-up actions per home than old method surveyors. During April-September 1981, QAP surveyors conducted 3.1 actions per home vs. 2.2 per home in O/O homes and 2.4 per home in control homes. During October 1981 through March 1982, QAP surveyors conducted a total of 3.3 actions per home vs. 1.6 in O/O homes and 2.2 in control homes.

However, surveyors in all treatment cells relied primarily on verification actions. In O/O and control homes, the only follow-up actions conducted were verification visits, and frequency of use of these visits remained relatively stable. In O/O homes, surveyors

Table 6

Use of Surveyor Follow-Up Actions in the Milwaukee
District Before and After the Change in QAP Citing Policy

Dist./Treatment Cell/Time Period		ER HOME	НОМЕ				
	Number of Homes	Consult- ation Inservice	Special Advisor	Invest- igate Further	Return to Verify Problem Correction	Citation Verification Visit	Total Actions
N/N							
4/81-9/81	10	0	0	.7	1.6	.8	3.1
vs. 10/81-2/82	8	0	0	0	1.8	1.5	3.3
0/0							
4/81-9/81	11	0	0	0	0	2.2	2.2
vs. 10/81-2/82	9	0	0	0	0	1.6	1.6
Control 4/81-9/81	11	0	0	0	0	2.4	2.4
vs. 10/81-2/82	10	0	0	0	0	2.2	2.2

averaged 2.2 and 1.6 visits per home during the two time periods. In control homes, surveyors averaged 2.4 and 2.2 visits per home in the two time periods. QAP surveyors also relied on verification visits and return to verify during the two time periods.

Conclusions

QAP monitored frequency and type of follow-up actions used by surveyors before and after the change in QAP state code citing policy. Although there was no change in QAP guidelines regarding use of follow-up actions, it was anticipated that the change in citing policy might nonetheless affect use of alternate actions.

Our findings confirmed that the change in citing policy was accompanied by some changes in surveyor use of follow-up actions. However, these changes were extensions of trends that had already been developing in N/N homes.

- In one of the three districts, there was a decline in use of follow-up actions in N/N homes which occurred concurrently with the fourth year change in citing. Madison surveyors used fewer total actions per home while Green Bay and Milwaukee surveyors showed no change.
- 2. When compared to old method surveyors, N/N surveyors were conducting more actions per home in the Madison and Milwaukee districts prior to he change in citing policy. After the change, N/N surveyors in Milwaukee continued to conduct more total actions than old method surveyors, while number of actions conducted by N/N surveyors in the Madison district declined to the same level as O/O surveyors. (There was no O/O comparison group within the Green Bay district.)
- 3. Prior to the change in citing policy, data on use of follow-up actions indicated that over time QAP surveyors were increasingly relying on verification activities. Use of alternate actions such as consultation, inservice, and investigate further were declining, and in some cases had dropped to zero. The change in citing policy only intensified this pre-existing trend. Use of alternate actions dropped even more, and in N/N homes in the Madison district, surveyors discontinued all actions except verification visits.

Thus, by the end of the demonstration, use of alternate actions was being minimally implemented by QAP surveyors. Although there was some evidence

that QAP surveyors were conducting somewhat more total actions per home than old method surveyors, they were increasingly and primarily relying on traditional verification activities.

D. Differences in Rate of Level of Care Changes

 No differences will be noted in the rate at which resident placement or level of care decisions are revised under either resident review method.

Two studies were conducted to assess this hypothesis.

A Comparison of Frequency of Level of Care Errors and Sampling Outcome Under QAP's Original and Revised Sampling Plans

When the project first initiated the new resident assessment method in each demonstration district, the outcome of resident sampling was routinely monitored by project staff. This monitoring permitted us to be alert to potential problems in implementation of QAP sampling. Data collected included number of homes sampled and passed, number of homes failing the sample, and number of homes in which surveyors opted to switch from sampling to inspection of care. In each of these three categories, we calculated the percentage of residents reviewed whom surveyors judged to be at an incorrect level of care. A resident's level of care determination reflects two important judgments—that the resident receives the degree of care appropriate to his or her needs and that the nursing home is reimbursed for the care of Medicaid recipients according to the level of care determination. Where available, results in homes eligible for sampling were compared to old method homes receiving the inspection of care.

Monitoring results in the first three years raised some concerns among project staff. The majority of homes were passing the sample, and sampled residents had an atypically low percentage of level of care (LOC) errors. This outcome suggested that perhaps surveyors were prematurely passing the sample or choosing to sample in homes which should be switched to an inspection of care. Also, in homes that failed the sample, the inspection of care showed only a somewhat higher percent of residents at incorrect levels of care as compared to the average error rate found in old method homes. This finding was contrary to expectations since only homes with problems at setting care levels would be expected to fail the sample.

Lastly, the variability between districts in choosing to sample or to switch to full inspection suggested a lack of uniformity in application of new method procedures. In response to these concerns, QAP staff instituted use of core criteria to aid in the decision to switch methods (see Section IV A) and revised its resident sampling procedures (see Section IV C).

Study Intent

The project implemented its revised resident sampling plan during fourth year training sessions in September and October 1981. In order to monitor the effect of this change, data were collected for a time period before and after the revised plan was implemented. We monitored the effect of the revised sampling plan on number of homes that passed and failed the sample and the percentage of incorrect care levels found in these homes. For comparison purposes, we also looked at homes in which surveyors opted to switch to the inspection of care.

It was anticipated that the more rigorous sampling plan would discriminate better between homes in their ability to accurately set care levels. The sample size for the majority of homes had been increased, and the number of incorrect levels of care allowed within the sample was lowered. Potential outcomes that could result from these changes include an increase in number of homes failing the sample and a corresponding decrease in number of homes passing the sample. A larger percentage of incorrect care levels might also be found in homes that pass the sample, and an inspection of care in homes which failed the sample should confirm that these homes did in fact have an atypically high number of incorrect care levels.

Data were collected from the Green Bay and Madison expansion districts and from the urban Milwaukee district. In the expansion districts, results from new method homes inspected under the last six months of the original sampling plan, April 1981 through September 1981, were compared to results from new method homes inspected under the first six months of the revised sampling plan, October 1981 through March 1982. For comparison purposes, results from Madison district homes assigned to the O/O treatment cell were also included for the time period of October 1981 through March 1982. Effective October 1, 1981, these homes, which had formerly been assigned to the O/N treatment cell, returned to the inspection of care (O/O).

In the Milwaukee district, results were collected for both N/N and O/O homes. Since Milwaukee district

homes ended their third year in the project and returned to full survey and inspection of care on March 1, 1982, the time period of the comparison was modified. Results from the last six months of testing of the original sampling plan, April 1981 through September 1981, were compared to results from the first five months of use of the revised sampling plan, October 1981 through February 1982. In O/O homes in the Milwaukee district, results of the inspection of care (IOC) are also reported for the same time period for comparison purposes.

Findings

Results from the expansion districts are shown in Table 7.

Only one of the anticipated outcomes was observed. The percentage of residents found to be at incorrect care levels increased in homes which were sampled and passed. In the Green Bay district, the percentage of observed incorrect care levels increased from 3% to 9.1%. In the Madison district, the percentage of observed incorrect care levels increased from 2.6% to 10.2%.

However, the significance of this increase needs to be considered in the context of first-year results from the expansion districts. The average level of care (LOC) error rate in homes that passed the sample during the first year in the expansion districts (1980-81) was 8% in the Green Bay district and 7% in the Madison district. Thus, the 3% and 2.6% LOC error rates observed during the first half of the second year were actually a decrease compared to the first year. With implementation of the revised sampling plan, the average LOC error rate in homes that passed the sample rose to a level only 1-3% higher than it had been during the first year.

The number of homes failing the sample showed little overall increase. In the Green Bay district, the proportion of homes failing the sample decreased; 7 of 19 sampled homes (37%) failed the sample under the original sampling plan vs. none of 19 sampled homes under the revised sampling plan. In the Madison district, the proportion of homes failing the sample showed a slight increase, 7 of 39 homes (18%) under the original plan and 4 of 18 homes (22%) under the revised plan.

In addition, there was a decrease in percentage of incorrect care levels found in homes which failed the sample. In the Green Bay district, no homes failed the sample after the revised plan was implemented. Under the revised plan, level of care error rates in Madison homes dropped from 18.3% to 12.3%.

Table 7

A Comparison of Level of Care Errors Under QAP's Original and Revised Sampling Plan in the Expansion Districts

	Percentage of Residents Misclassified in Homes Eligible for Sampling							Percentage of Residents	
District/Method/ Time Period	•	led and ssed es %	-	ailed ample nes %	Switch IO # home	C	T # hom	otal es %	Misclassified in IOC Homes # homes %
Green Bay-New 4/81-9/81 vs. 10/81-3/82	12 19	3.0 9.1	7	16.5	7 10	14.3 13.8	26 29	13.7 12	, NA
Madison-New 4/81-9/81 vs. 10/81-3/82	32 14	2.6 10.2	7	18.3 12.3	1	3.3 16.9	40 19	11.2 12.3	NA
/ladison-Old 10/81-3/82				NA					18 10.5

Percentage of LOC errors found in homes where surveyors decided to switch to the inspection of care are also shown in Table 7. In the Green Bay district, surveyors increased the number of homes in which they decided not to sample; during both time periods, the inspection of care showed an average LOC error rate of approximately 14%. In the Madison district, surveyors switched only one home to inspection of care during each time period, and the LOC error rate in each home was distinctly different, 3.3% vs. 16.9%.

Little change was noted in overall LOC error rate as a result of implementation of the revised sampling plan. In the Green Bay district, the average LOC error rate was 13.7% under the original plan and 12% under the revised plan. In the Madison district, the overall LOC error rate was 11.2% under the original plan and 12.3% under the revised plan. However, this percentage exceeded the percent LOC error rate (10.5%) found in old method homes in the Madison district.

Results from the Milwaukee district are shown in Table 8.

Table 8

A Comparison of Level of Care Errors Under QAP's Original and Revised Sampling Plan in the Milwaukee District

	Percentage of Resident Misclassified in Homes Eligible for Sampling							Percentage of Residents		
Treatment Cell/Time		oled & ssed es %		iled mple es %	Switche IOC # homes	;	To # home	otal es %		lassified in Homes mes %
N/N 4/81 - 9/81 vs.	8	2.0	1	15.6	0	-	9	8.2	ı	NA
10/81 - 2/82 O/O and control 4/81 - 9/81 vs. 10/81 - 2/82	6	8.3	1	22.1 N	1 A	0	8	13.6	18 18	15.4 13.9

Findings from the Milwaukee district are more in line with anticipated outcomes. However, the number of homes is relatively small.

The most apparent trend is an increase in the percentage of LOC errors found in homes which passed the sample. Under the original sampling plan, 2.0% of the residents reviewed were classed at incorrect levels of care. Under the revised sampling plan, 8.3% of the sampled residents were found to be misclassified. This increase is also maintained when compared to first year results from the Milwaukee district. During the first year of operation under the original sampling plan, 3% of the residents reviewed were misclassified in homes which received and passed the sample.

The proportion of homes failing the sample increased slightly, from 11% (1 of 9) to 14% (1 of 7). There was an increase in percentage of LOC errors found in homes that failed the sample. Under the original sampling plan, an inspection of care in the one home that failed the sample showed an error rate of 15.6%. Under the revised plan, the one home which failed the sample had an error rate of 22.1%.

Surveyors did not switch any new method homes to inspection of care during the first time period. Only one home was switched during the second time period, and this home had no residents placed at incorrect levels of care.

In all homes eligible for sampling, the average LOC error rate increased following implementation of the revised sampling plan, and this increase corresponded more closely with results from old method homes. Under the original plan, 8.2% of the residents reviewed were misclassified. This percentage was considerably less than the 15.4% error rate found in old method homes during the same time period. Under the revised sampling plan, 13.6% of the residents reviewed were judged to be misclassified. This percentage more closely approximates the 13.9% observed in old method homes during the same time period.

Conclusions

Percentage of residents placed at incorrect care levels and the outcome of sampling were compared under the original and revised sampling plans in the Green Bay, Madison, and Milwaukee districts. It was anticipated that the revised sampling plan would be more rigorous and that there would be an increase in number of homes failing the sample and/or an increase in percentage of incorrect care levels found as a result of the larger sample size and lower cut-offs for

failing the sample. However, the anticipated outcomes occurred only in part.

- In two of three districts, the number of homes failing the sample showed a small increase under the revised sampling plan as compared to the original plan. In the Madison and Milwaukee districts, there was a small increase in proportion of homes failing the sample. In the Green Bay district, the proportion of homes decreased.
- 2. In homes that failed the sample under the revised sampling plan, results of the inspection of care also varied by district. In the Green Bay and Madison districts, the observed percentage of incorrect care levels actually decreased under the revised plan as compared to the original sampling plan. However, in the Milwaukee district, the expected increase was observed, and the percentage error rate found by the inspection of care confirmed that these homes had atypically large numbers of residents at incorrect care levels.
- 3. The percentage of residents found at incorrect care levels in homes that received and passed the sample increased in all districts upon implementation of the revised sampling plan. This increase was very systematic in all districts, increasing from about 3% to 9%. However, in the expansion districts, this increase amounted to only a small increase over the pattern observed in their first year of sampling under the original sampling plan. In the Milwaukee district, the increase was more lasting as compared to its first year of operation.

These data suggest that other unknown factors are operating. There appears to be a strong element of surveyor judgment or discretion entering into the sampling plan. These judgments might be based on such factors as overall quality of care in the home, surveyor workload, etc. The findings indicate a need to further explore what variables are influencing the outcome of sampling beyond the home's ability to accurately determine resident level of care.

Impact of Sampling on Medicaid Nursing Home Reimbursement

Study Intent

In Wisconsin, there are currently five levels of care—skilled nursing care (SNF) and four levels of intermediate care (ICF 1, 2, 3 and 4). These care levels are a

key factor influencing the rate of Medicaid reimbursement received by a nursing home. They also relate to computations for state staffing requirements.

In summer 1981, the project initiated a preliminary study of nursing home reimbursement dollars lost or gained as a result of sampling. It was conducted under the direction of our project consultant at the University of Wisconsin Statistical Laboratory. The study compared differences in rate of reimbursement before and after the resident review in a sample of homes receiving new and old methods. It examined total dollars saved by the State per resident reviewed and the potential savings lost for those residents not reviewed, i.e., not included in the QAP in-depth sample. Preliminary findings were reported to the Bureau of Quality Compliance in January 1982. Due to amount of interest in the study and to other questions still left unanswered, this initial study was significantly expanded.

The Department's Bureau of Evaluation was responsible for the expanded analysis of the effect of QAP sampling on nursing home reimbursement. The study focused on three important questions:

- 1. What is the comparative cost or savings to the State in nursing home reimbursement under the inspection of care and under the QAP sampling method?
- 2. What is the comparative administrative cost of conducting the inspection of care and the QAP sampling method?
- 3. What is the net savings or cost to the State in nursing home reimbursement after taking into consideration the cost of conducting the review under the old and new methods?

A full report of the study, entitled "An Analysis of the Effect of Wisconsin's Inspection of Care Reviews on Medicaid Nursing Home Reimbursement: A Comparison of the Quality Assurance Project Approach and the Federally Mandated Approach," is available upon request from the Bureau of Evaluation, Division of Policy and Budget, Wisconsin Department of Health and Social Services. The study is dated March 25, 1982 and provides a full analysis of the methodology and findings summarized here. The study also found yearly differences by method as well as district differences, and the reader is referred to the original report for a detailed assessment of these differences.

Data for the study were collected by QAP staff. A total of 320 homes were randomly selected from all seven districts. Resident review findings were included from the 1980 and 1981 annual visits. Results include 135 homes for 1980 and 185 homes for 1981.

QAP new method homes included homes assigned to the new resident assessment treatment cell and therefore eligible for sampling. Depending on the home's history and on the outcome of the sample, these homes fell into one of three categories - (1) surveyors elected to switch from sampling to full inspection based on the home's history; (2) the home was sampled and failed the sample; and (3) the home was sampled and passed the sample. Old method homes included homes only eligible for and receiving the inspection of care.

The reimbursement effect of the resident reviews was calculated by comparing total Medicaid reimbursement before and after the resident reviews were conducted. The difference between the two was the savings or loss to the State which was due to level of care changes made during the review. For each home, the number of Medicaid residents at each of the five levels of care was counted and multiplied by the home's rate of reimbursement for each level both before and after the review.

Administrative costs were based on the number of staff hours devoted to conducting resident reviews during the three month period April through June 1981 from four districts. Data were separated by registered nurse and social worker. The number of reviews conducted during this time period was also calculated. Applying the average registered nurse and social worker wage rates to the time per review provided an estimate of the salary cost per review (Including fringe benefits, travel, overhead, etc.).

Findings

Number of homes included in the study by method and by survey year are shown in Table 9.

Table 9

Number of Nursing Homes in Study

	1980	1981	Total
IOC	75	78	153
QAP	60	107	167

Table 10 reflects the total number of Medicaid residents, the number reviewed, and the resulting number and percentage of residents found to be misclassified. Note that in QAP homes the number of Medicaid residents in a home and the number reviewed are different due to QAP sampling, whereas under the old method all Medicaid residents are reviewed. Consistent with findings reported in QAP's

second and third annual reports, a smaller percent of residents are found misclassified in QAP homes as opposed to inspection of care homes.

Table 10
IOC Basic Information

	IOC	QAP
	1980 & 81	1980 & 1981
Total No. of		
Medicaid Residents	11,798	12,324
No. Reviewed	11,798	3,261
% Reviewed	100 %	26.5
# Misclassified	1,823	318
% Misclassified	15.5	9.8

Table 11 reflects the reimbursement savings to the State per day by method of review. Savings are calculated per resident reviewed, per resident misclassified, and per total number of Medicaid residents in the home.

Table 11

Reimbursement Savings Per Day by Method
1980-1981

	IOC	QAP
\$/review	.096	.264
\$/misclassified resident	.62	2.71
\$ total Medicaid residents	.096	.070

On the average, QAP resident assessment saves more money per resident reviewed and per resident misclassified than does the inspection of care. QAP averaged a savings of 26.4¢ per review vs. 9.6¢ per review under the old method. QAP averaged a sav-

ings of \$2.71 per resident misclassified vs. 62¢ per resident misclassified under the old method. However, when the total savings is averaged across total number of Medicaid residents in the homes, the old method saves more, 9.6¢ per resident vs. 7¢ per resident under QAP. QAP savings are reduced by the fact that not all Medicaid residents are reviewed under the QAP method.

Table 12 looks at reimbursement savings in QAP homes by the three options to pass the sample, fail the sample, and switch to inspection of care.

If the QAP savings are further divided into the review options available (pass, fail, and switch methods), it can be seen that:

- a. All QAP options save more nursing home reimbursement dollars on a per review basis than the old method which saves 9.6¢ per review;
- All QAP options save more nursing home reimbursement dollars per resident misclassified than the old method which saves 62¢ per misclassified resident;
- c. The QAP failed sample and switched to 100% review save more dollars per total Medicaid residents in the home than the old method which saves 9.6¢ per Medicaid resident;
- d. Homes that pass the sample save the most (\$3.55) per misclassified resident.

However, In homes which pass the sample, QAP saves only 3.6¢ per day per total Medicaid residents in the home as compared to 9.6¢ under the old method. This category constitutes the largest group of homes under the QAP method, 83%.

Table 13 summarizes the administrative costs of conducting the resident review.

Table 12

1980-1981 Reimbursement Savings
Per Day by QAP Option

	No. of	% residents	\$ saved	\$ saved per misclassified	\$ saved per total Medicaid
QAP Method	homes	misclassified	per review	resident	in home
Passed sample	138	6.8	.242	3.55	.036
Failed sample	15	12.6	.327	2.60	.327
Switched to IOC	14	12.3	.238	1.85	.238

Table 13

Surveyor Hours and Cost of Conducting a Resident Review

	Hours Per Medicaid	Total Cost Per
Method	Review	Review
IOC	1.37	\$24.04
QAP Sample	2.04*	\$35.80

^{*}This figure is adjusted for time spent on private pay reviews by QAP. Since reimbursement savings result only from Medicaid residents, surveyor time and costs must be prorated over Medicaid residents only.

Thus, the QAP method costs more per Medicaid resident (\$35.80) than does the old method (\$24.04). This cost difference is due to two primary factors. First, the QAP in-depth review of the sampled residents takes more time than a resident review under the old method. Second, QAP includes private pay residents in the sample, and speaking strictly from a cost perspective, review of private pay residents requires surveyor time but nets no nursing home reimbursement savings to the state or federal governments.

Table 14 summarizes the statewide savings by method for 1980 and 1981 combined.

If applied statewide, the inspection of care method would review 37,752 Medicaid residents at a cost of \$24.04 each, costing \$907,558 per year. This review would reduce annual state payments to nursing homes by \$35.04 for each resident reviewed, resulting in a statewide savings of \$1,322,830. The net savings to the state after administrative costs were deducted would be \$415,272.

If applied statewide, it is projected that the QAP method would result in a somewhat larger savings. The cost projections for the QAP estimate are modified to reflect the proportion of times an inspection of care is substituted for the QAP sample (i.e., surveyors switch methods or the home fails the sample and receives an inspection of care). Approximately 10,000 residents would be reviewed at a cost of \$36.86 each, costing the state \$368,747 per year. Each review would reduce annual state payments to nursing homes by \$96.36, resulting in a statewide savings of \$963,985. The net savings to the state after administrative costs were deducted would be \$595,238.

Thus although QAP reviews cost more per review than the old method, QAP would net a larger savings because fewer residents are reviewed and there is a greater savings in nursing home reimbursement dollars per review. However, the net difference between the two methods is not large.

Conclusions

- 1. Resident reviews are cost beneficial regardless of whether conducted under QAP sampling or the inspection of care method.
- There is little difference between the methods in their net savings to the State. QAP sampling is not losing nursing home reimbursement dollars as compared to the inspection of care.
- 3. Nursing homes that pass the QAP sample have a substantial savings per resident reviewed and thus residents not reviewed may represent large sums of unrealized savings.

Table 14
Statewide Savings by Method, 1980-1981
(In dollars)

Method	No. of Reviews	Cost/ Review	Total Cost to State of Review	Savings/ Review	Total Nursing Home Reimburse- ment Savings	Net Savings
IOC	37,752	24.04	907,558	35.04	1,322,830	415,272
QAP	10,004	36.86	368,747	96.36	963,985	595,238

E. Enforcement Actions, Administrative Cost and Nursing Home Satisfaction

No data studies were conducted by QAP staff which addressed the following hypotheses:

- Enforcement actions brought against homes surveyed with the facility screening method will be more specific than those brought against homes surveyed with the mandated method.
- Average cost of the facility review process for the demonstration method homes will not be different than for the mandated full survey homes.

- The nursing homes reviewed with the screening survey will be more satisfied than homes reviewed with the full survey.
- The nursing home reviewed with sampling will be more satisfied than homes reviewed with the inspection of care.

At its start-up, QAP initiated a study of attitudes of nursing home administrators toward QAP methods. However, due to design problems and weaknesses in the questionnaire, this study was discontinued. The reader is referred to the final evaluation report prepared by WHCRI for data studies concerning nursing home satisfaction.

VII. IMPLICATIONS AND RECOMMENDATIONS

To resummarize our conclusions based on our field observations and data monitoring studies, QAP found that:

- (1) Facility screening using the 10 key criteria was minimally implemented.
- (2) Resident sampling was fully implemented and appears to have been overused. The majority of homes received and passed the sample.
- (3) Surveyor time reallocation from good to problem homes was partially achieved. QAP surveyors reallocated only part of the total time saved in good homes, resulting in an overall time savings. Non-QAP surveyors demonstrated proportionally greater time reallocation from good to problem homes than did QAP surveyors.
- (4) QAP surveyors used more follow-up actions per home. However, they relied on the more traditional actions, and, over time, use of actions declined.
- (5) The inclusion of a practicing advisory nursing home administrator was felt beneficial by both surveyors and volunteer administrators.
- (6) There were no differences between QAP and non-QAP homes in compliance with regulations, frequency of repeat problems and overall Medicaid reimbursement to nursing homes. Yet QAP methods saved time and surveyors used alternative methods to citing to correct problems.

What we ultimately expected to demonstrate—improved quality of care in QAP homes—did not occur. There is a temptation here to rationalize "if only...." Yet it is useful to examine what potentially caused the outcomes to be different from what we anticipated. With the knowledge of hindsight, we can hopefully shed some light on the barriers and difficulties we encountered, thus making our experience useful to others who may be planning to implement or test similar methods.

We divide the causes into three general sources—operational, philosophical/conceptual, and educational. There were three operational problems. First—"demonstration strain"—having four cells, running four years and having the control methods change more often than the demonstration methods, took its toll. Second, the project's administration was outside bureau lines which added to the "experiment" headset. Therefore, bureau staff in general were less likely to

regard the methods as accepted practice. Third, our internal monitoring of project operations was too limited. Our rapid expansion into additional districts after start-up led us to focus heavily on training and implementation preparation and not enough on monitoring outcomes in the field. It took some time before we realized how complex the problems in implementation were, and then we did not have the resources to resolve them. In addition, it was not until the last year of the project that our internal data studies began to clearly document incomplete implementation of the methods, e.g., the study of surveyor time allocation.

There were two primary philosophical/conceptual causes. First, there was a psychological barrier to using alternate actions to citing. Surveyors knew QAP was a demonstration which was testing an unproved process which, technically, was not in keeping with state statutes since it permitted alternate actions to citing of state codes if the problem was not directly threatening to resident health and safety. Since nursing home residents are a vulnerable population whose welfare surveyors are charged to protect, surveyors may have been uncomfortable fully implementing methods which might fail.

Second, in 1980 a special legislative committee was formed to study nursing home enforcement in light of media criticisms of the State's enforcement process. Although there was no criticism of QAP, clarification of state statutory requirements led eventually to a change in QAP's policy on citing state code during the fourth project year. The legislative committee's deliberations may have caused more "conservative" surveyor behavior and lessened surveyor opportunity and motivation to use alternate actions even prior to the fourth year changes.

There were two educational causes. First, we underestimated how big a transition it would be for surveyors to switch from checking codes to screening. Second, surveyor training was not carried out as originally planned due to a lack of resources.

Wisconsin has learned a great deal from the QAP demonstration which may be of interest to others in nursing home regulation. Portions of five of the eight QAP components (strategy, team approach, advisory administrator, systems evaluation and administration) have been adopted or are currently under consideration for possible implementation. Three—screening, sampling and alternate actions to citing—require federal regulatory change or waivers. Alter-

nate action to citing also requires a change in state statute.

In January 1982, Wisconsin requested of the federal Department of Health and Human Services (HHS) approval of waivers under Section 1915(b) of the Social Security Act that would enable screening and sampling statewide. That proposal was based on our experience with QAP and specified full surveys and inspections of care every two years, with the option to use a QAP approach (screening, sampling or full review as indicated by the homes' compliance record) in between the full inspections.

The request was not approved, as HHS determined the Wisconsin proposal was outside the authority given the Secretary in Section 1915(b). The inability to obtain statewide waivers at this time offers us a chance to take stock of the quickly changing regulatory atmosphere and determine where QAP experlences can best point ways for Wisconsin to cope with budget reductions, increased workload and evolving long-term care philosophies.

We highlight three areas which Wisconsin will continue to ponder.

Screening

Federal requirements specify that nursing homes be checked annually (Medicare requirements did change in the project's fourth year) for compliance with all conditions of participation. We proposed, but were only partially successful in implementing, use of a form listing quality criteria that had no direct ties to state codes or to the federal conditions of participation and which often called for subjective "outcome" assessments.

In comparing screening with the full survey, we saw no difference between the methods in identifying problems which directly threatened resident health and safety or the home's participation in the Medicaid/Medicare programs, no deterioration in compliance after three years of screening, and no greater frequency of recurrent problems from one year to the next. However, since we believe screening was never fully implemented, this leads us to speculate whether screening might yet provide a superior approach to problem identification than the required full survey.

Sampling

Annual on-site inspection of each Medicaid nursing home resident is federally required. We fully demonstrated two sampling approaches, both based on random selection of all residents in a facility. We learned that as regards the level of care determination (which impacts on reimbursement) more homes than would be expected passed the sample review. Overall, however, this did not result in higher reimbursement for QAP homes; and after 3 years of sampling, there was no difference in percent of incorrect care levels in QAP homes as compared to homes which had always received an inspection of care. Sampling for level of care, we conclude, is a possibility, but we would add that the element of surveyor judgment—and possibly method of selecting residents for review—be reconsidered prior to any future implementation.

Analysis of the ability of sampling to accurately assess quality of care is, of course, far less quantitative. Again, there was no difference between the sample versus full review methods in identifying problems which directly threaten resident health and safety. However, there are philosophical issues of advocacy for each and every Medicaid resident which need to be resolved.

Targeting

The demonstration philosophy was peppered with options and alternate sanctions which relied heavily on professional judgment and surveyor discretion. We learned that while surveyors liked QAP better than the mandated process, the outcomes of time reallocation and use of alternate actions were only partially observed.

QAP surveyors did not reallocate all of their time saved in "good" and "average" homes to activities in "problem" homes. Had the feedback been there to encourage surveyors to reallocate, the results may have been different. Perhaps if QAP had carried out more timely data collection and on-site monitoring of surveyor performance from a statewide perspective to create the needed feedback, reallocation might have occurred as proposed.

Surveyors might also have been able to use a wider range of more creative actions if additional training had been provided. For example, surveyors lacked the experience and/or skills needed to provide formal inservice and consultation to a facility. Various project inservices did focus on these areas, but surveyor feedback and project staff assessment indicated that additional and more specific training would have been beneficial. Also, many bureau staff members did not provide the necessary feedback and support needed to reinforce the validity of alternate actions, and the number of special consultants available to support surveyors dropped radically over the course of the demonstration.

In addition, nursing home administrators that received QAP method inspections in their facilities did not respond to the incentives for less disruption by the state survey process by upgrading the quality of care, reducing occurrence of repeat problems, and improving accuracy of resident levels of care. The results of QAP data studies, again, were too late to press for more "good faith" improvement efforts by facilities. Had QAP carried out more timely monitoring of nursing home performance from a statewide perspective and provided needed feedback, upgrad-

ing of quality of care might have occurred more as proposed.

In looking back over the demonstration experience, we are convinced the concepts offer potential for further exploration and study. We have found the forum for self-examination both illuminating and helpful in this time of proposed change in approach to nursing home regulation.

APPENDIX A

Glossary of Terms

Pertinent to the Quality Assurance Project

Advisory Nursing Home Administrator. Active or practicing nursing home administrator, recommended by a nursing home association, who voluntarily serves as an advisor on the QAP survey team.

Bureau of Evaluation (BOE). A sub-unit of the Wisconsin Division of Policy and Budget which is responsible for conducting department-wide program evaluation studies.

Bureau of Quality Compliance (BQC). The sub-unit of the Wisconsin Division of Health which is responsible for regulating institutional health care providers. The bulk of its work is nursing home inspection for licensure and certification.

Certification. The outcome of a process where a nursing home is reviewed by the State (as agents of HHS) for compliance with federal regulations and laws and is approved (certified) to receive vendor payments from Medicare or Medicaid. A facility can be licensed but not certified; however licensure is a prerequisite for certification.

Chapter 50. The chapter of the Wisconsin Statutes governing licensing of nursing homes.

Class A, B & C Violations. Violations of state codes are classed by their severity:

- Class A "...a substantial probability that death or serious mental or physical harm to the resident will result therefrom." (Forfeiture of \$1,000-\$5,000/day)
- Class B "...directly threatening to the health, safety or welfare of a resident." (Forfeiture of \$100-\$1,000/day)
- Class C "...does not directly threaten the health, safety or welfare of a resident." (Forfeiture of \$10-\$100/day)

Conditions of Participation. Eighteen areas of service, personnel and structural requirements that a facility must meet at least to a minimum level prescribed by federal regulations in order to be certified for federal funds under the Medicaid and/or Medicare Programs. The facility compliance with the eighteen conditions of participation is determined by "standards"

and "elements" which are requirements that comprise the conditions of participation.

Core Criteria. Compliance and performance "red flags" developed by QAP which suggest surveyors should do a full review rather than sample or screen.

Deficiency. A term used to mean non-compliance with a federal requirement within the conditions of participation. A home cited for deficiencies must correct those deficiencies or risk losing certification in Medicare and Medicaid.

Department of Health and Social Services (DHSS). The Wisconsin agency responsible for the health and welfare of the state's citizens. It is the parent agency of the Bureau of Quality Compliance and agent of HHS for Medicare and Medicaid.

Expansion Districts. QAP expanded into the Madison and Green Bay districts in April 1980.

Facility Assessment. A general term used in this report to refer to review of a home's compliance with state and federal regulations governing the home's physical plant, staffing, and care delivery systems. Two alternative methods of facility assessment are discussed in this report - (a) the mandated full facility survey; and (b) QAP facility screening.

ICF (intermediate care facility). A nursing home that provides intermittent nursing care to patients who do not require SNF care but who require basic health related care and services.

Inspection of Care (IOC). An annual review of each Medicaid nursing home resident by a nurse and social worker, and physician as needed, to assess the quality and appropriateness of care provided to that resident.

Licensure. The outcome of a process whereby a nursing home is reviewed by the State for compliance with state laws and approved (licensed) to operate as a nursing home in Wisconsin.

Medicaid. (also Medical Assistance, Title XIX). The state and federally-funded program which pays for medical care of the poor.

Medicaid Management Study Team (MMST). A oneyear task force which began in 1976 to study the Wisconsin Medicaid Program. QAP is an outgrowth of MMST proposals.

Medicare. (also Title XVIII). Federally-funded health insurance program for those over 65 and disabled.

Milwaukee District. QAP began in a subset of homes in this urban district in March 1979 and ended in February 1982.

Nursing Home Quality Assurance Project (QAP). A sub-unit of the Bureau of Quality Compliance carrying out the demonstration of screening and sampling for quality of nursing home care.

Region V. One of the ten HHS regional areas. The Region V office is located in Chicago and serves Wisconsin, Minnesota, Michigan, Illinois, Indiana and Ohio.

Resident Assessment. A general term used in this report to refer to the review of the quality and appropriateness of care received by individual residents in a facility. Two alternative methods of resident assessment are discussed in this report - (a) the mandated inspection of care of all Medicaid residents; and (b) QAP in-depth resident sampling.

Sampling. QAP method of resident assessment in which a random sample of residents of all pay types is reviewed in-depth to determine whether the home's resident care system is working. If the sample fails, surveyors switch to the inspection of care of all Medicaid residents.

Screening. QAP method of facility assessment in which a home is screened using 10 key quality of care criteria. If problems are detected, surveyors may switch to a partial survey or to the full survey and its checklist of 1500 regulations.

Section 1115 Waiver-Only Demonstration. Derives from Section 1115 of the Social Security Act which enables the Secretary of HHS to waive compliance with certain regulations in order to carry out demonstrations. Annual applications are submitted for review and must include experimental design controls and human subject safeguards.

SNF(skilled nursing facility). A nursing home that provides 24-hour nursing care to patients that require it.

Strategy Session. The session conducted prior to entering a QAP method home where the portfolio of the home's past performance is reviewed by the team and details of the visit are planned. For example, if a QAP-eligible home is on surveillance, a decision whether or not to screen must be made.

Survey. The on-site review and report required by state and federal law which will be the basis for issuing a license or certification.

Title XIX and Title XVIII. See Medicaid and Medicare.

Treatment Cells. QAP has included four experimental treatment cells:

	Facility	Resident
Treatment Cell	Assessment	Assessment
New/New (N/N)	= QAP screening	QAP sampling
New/Old (N/O)	= QAP screening	Inspection of
		care
Old/New (O/N)	= Full survey	QAP sampling
Old/Old (O/O)	= Full survey	Inspection of
		care

Violation. A term used to mean failure to comply with state codes (Chapter 50 of Wisconsin Statutes and the administrative codes promulgated thereunder) in which case a "Notice of Violation" (NOV) is served on the nursing home. Violations are classified by their severity (see Class A, B and C violations) and may result in forfeitures and other enforcement actions.

WHCRI (Wisconsin Health Care and Research, Inc.)
The independent HSS grantee evaluating the Quality
Assurance Project. Dr. David Gustafson is the Principal Investigator.

Years 1-3. The first three years of QAP included July 1978 through June 1981 during which the methods remained relatively stable and were tested and refined as originally proposed.

Year 4. The fourth and last year included July 1981 through June 1982. During this year, project methods were modified based on the past three years experience, and the changes in sample size and citing policy for state codes were implemented in October 1981. A three-month extension of the fourth year was approved July 1 through September 29, 1982 to enable completion of final reports and transfer of data for future comparative evaluation with other long-term care demonstrations.

APPENDIX B

Previous Published Reports of the Quality Assurance Project

Quality Assurance Project, Quarterly Reports

October 31, 1978
February 20, 1979
January - March, 1979
April - June, 1979
July - September, 1979
October - December, 1979
January - March, 1980
April - June, 1980
July - September, 1980
October - December, 1980
January - March, 1981
April - June, 1981
July - September, 1981
October - December, 1981
October - December, 1981
January - March, 1982

Quality Assurance Project, First Year Report, 1978-1979
Quality Assurance Project, Technical Report, June 1980
Quality Assurance Project, Second Year Report, 1979-1980
Quality Assurance Project, Third Year Report, 1980-1981

